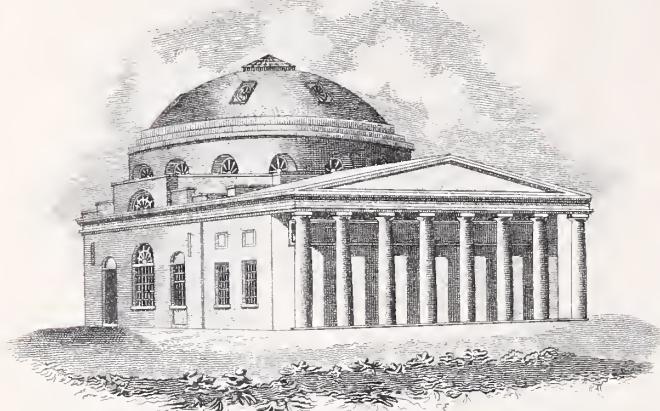


TWO AERIAL VOYAGES
of
DR. JEFFRIES with MONS. BLANCHARD
by
DR. JOHN JEFFRIES

1786

*The first book written by an American on acronautics.
It describes the first flight by air
across the English Channel.*

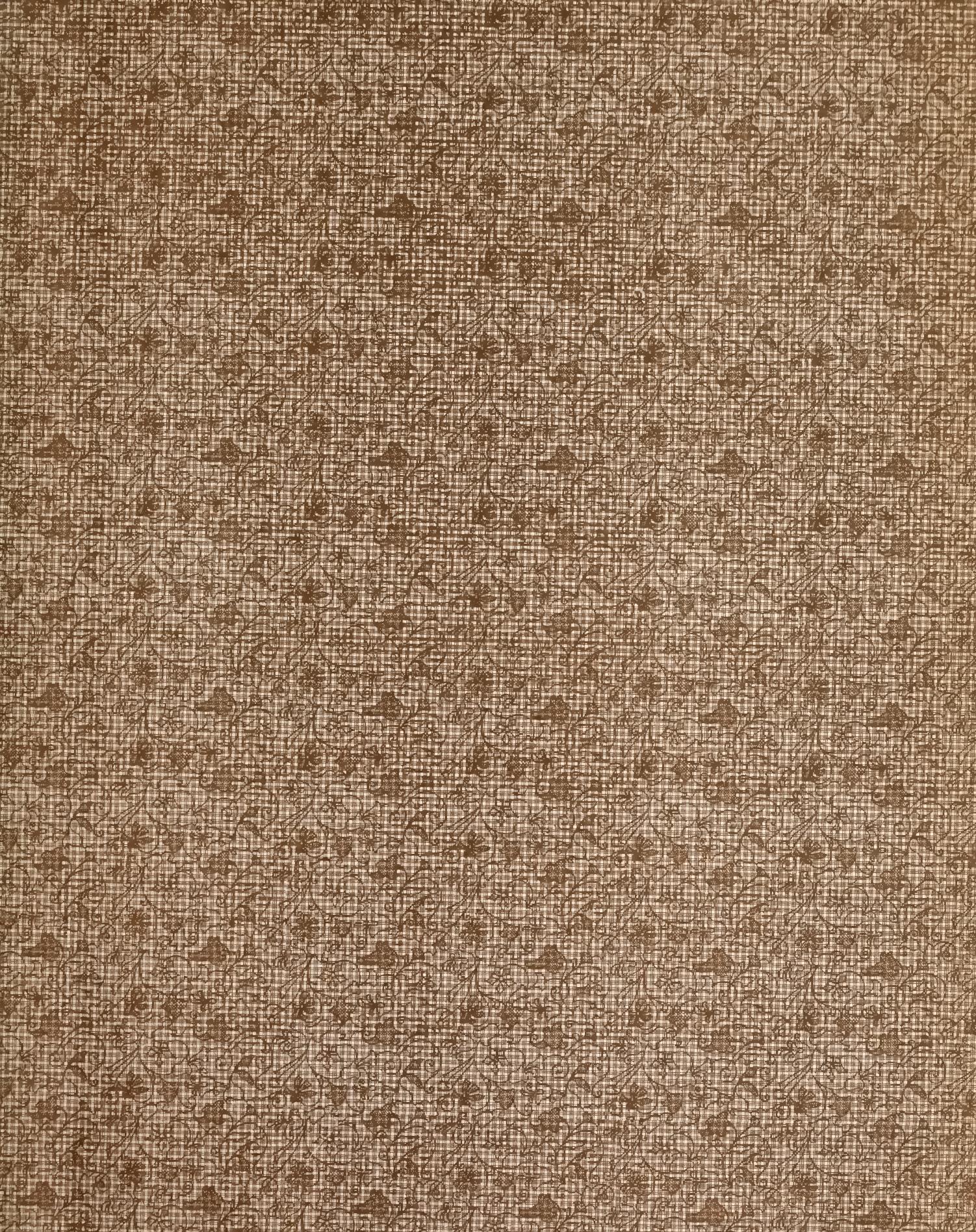
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F O R E W O R D

THE Book "A Narrative of the Two Aerial Voyages of Dr. Jeffries with Mons. Blanchard; with Meteorological Observations and Remarks, by Doctor Jeffries, London, 1786," is now so rare that the Aeronautical Archives of the Institute of the Aeronautical Sciences, with the cooperation of the Work Projects Administration of New York City, has prepared copies for distribution to libraries and universities so that this interesting and historically important volume may be available and more widely read than heretofore.

No copies are for sale and the entire edition has been distributed.

Dr. John Jeffries, who made the first crossing by air of the English Channel with Jean Pierre Blanchard, was born in Boston, Mass. on February 5, 1744. His great grandfather, David Jeffries, emigrated from England to Boston in 1677. After graduating from Harvard College in 1763, he studied medicine in England and Scotland and received his Doctor of Medicine degree from Marischal College, Aberdeen, at the age of twenty-five. Returning to Boston, he practised there until 1771. Going to Halifax with the Loyalists in 1775 he acted there as an apothecary and surgeon under Gen. Eyre Massey. In 1779, he was given a commission "as surgeon to the forces in New York," and served with the troop ships off the southern states. After the Revolution, he practised in London until 1790 when he returned to Boston where he became a prominent physician and surgeon. He died in Boston on September 16, 1819.



While living in London he became interested in *levitation*, as ballooning was sometimes called. He wanted to make a flight to study the scientific properties of the atmosphere. His writings show clearly that this was the underlying purpose of his two famous balloon voyages. Blanchard furnished the technical skill for the construction and operation of the balloon but it was Dr. Jeffries who paid all the bills, accepted the responsibility and made the observations.

Although the last flight was made on January 7, 1783, his narrative while presented to the Royal Society on April 14, 1785, was not read before its members until January 1786. In March 1786, he published privately the narrative of the two aerial voyages which is the first book in the English language on aeronautics by an American. It may be claimed for Dr. Jeffries that he was the first person to make scientific observations from the air as well as to make the first over-water flight in a balloon. He dropped a written message to his friend, Mr. Arodi Thayer, during his flight over London. This note is in the Snell Museum of Physics of Amherst College and is the earliest existing air mail treasure.

After Dr. Jeffries and Blanchard had landed in France they were entertained by many notables including the King. The account of their reception, written by Dr. Jeffries' grandson, was prepared from his diary, and is reproduced as an interesting continuation of Dr. John Jeffries' story of the cross-Channel Flight.



J. Russell pinxit
Crown Painter to his
Royal Highness the
Prince of Wales.

{Caroline Watson sculp.
Engraver to her Majesty.

JOHN JEFFRIES MD

We appear'd at this time to be about three quarters of the distance towards the French shore; and we had fallen so low as to be beneath the plane of the French cliffs.

We were then preparing to get up into our Slings, when I found the Mercury in the Barometer again falling, & looking around, soon observ'd that we were rising, & that the pleasing view of France was enlarging & opening to us every moment, as we ascended, so as to overlook the high grounds.

* DR. JEFFRIES NARRATIVE, — SECOND VOYAGE.

Published according to Act of Parliament, April 3rd 1786, by James Robson, Bond Street.

A
N A R R A T I V E
O F T H E
T W O A E R I A L V O Y A G E S
O F
D O C T O R J E F F R I E S W I T H M O N S . B L A N C H A R D ;
W I T H
M E T E O R O L O G I C A L O B S E R V A T I O N S A N D R E M A R K S .

T H E F I R S T V O Y A G E , O N T H E T H I R T I E T H O F N O V E M B E R , 1 7 8 4
F R O M L O N D O N I N T O K E N T :

T H E S E C O N D , O N T H E S E V E N T H O F J A N U A R Y , 1 7 8 5 ,
F R O M E N G L A N D I N T O F R A N C E .

B Y D O C T O R J E F F R I E S .

P R E S E N T E D T O T H E R O Y A L S O C I E T Y , A P R I L 1 4 , 1 7 8 5 ;
A N D R E A D B E F O R E T H E M , J A N U A R Y , 1 7 8 6 .

L O N D O N :
P R I N T E D F O R T H E A U T H O R ;
A N D S O L D B Y J . R O B S O N , N E W B O N D - S T R E E T ,

M . D C C . L X X X V I .

IND



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1786

F I R S T V O Y A G E,

ON THE THIRTIETH OF NOVEMBER, 1784,

FROM THE

RHEDARIUM, NEAR GROSVENOR SQUARE, LONDON,

INTO THE

PARISH OF STONE, IN THE COUNTY OF KENT:

In performing which, we were suspended, and floating in the
Atmosphere, one Hour and twenty-one Minutes.

TO
ROBERT SANDERSON, Esq.

IN GRATEFUL ACKNOWLEDGMENT

OF THE GENEROUS FRIENDSHIP AFFORDED BY HIM,

BOTH PROFESSIONAL AND PERSONAL;

AS WELL AS FOR

HIS INGENIOUS HINTS RESPECTING SUCH EXPERIMENTS,

THE FOLLOWING NARRATIVE

IS RESPECTFULLY INSCRIBED,

BY HIS VERY OBLIGED,

AND VERY OBEDIENT,

HUMBLE SERVANT,

JOHN JEFFRIES.

MARGARET-STREET,
CAVENDISH-SQUARE,
March 12, 1786.

A D V E R T I S E M E N T.

THE Writer of the following interesting Narratives, would have indulged his inclination of laying them before the Public, immediately after the events had taken place, (the several curious particulars of which are therein recorded) but they having been at that time honoured with the attention of Sir Joseph Banks, President of the Royal Society, who was pleased to think them worthy of being read before that illustrious Body; on which account, he thought it his duty to submit them first to their inspection, that they might afterwards be ushered into the world under the sanction of those distinguished Judges and Patrons of Philosophical Discoveries and Experiments.

A circumstance so flattering to the Author, will, he hopes, be considered as a proper apology for retarding the publication; especially, as the Manuscript was but lately returned to him; it having remained much longer than he expected in the hands of the Royal Society; and the Engravings annexed, could not be earlier completed.

PROCES

PROCES Verbal de l'Experience Aerostatique de M. Blanchard, Ingenieur en Méchanique, accompagné de Mr. Jeffries, Docteur en Medecin, et ancien Chirurgien des Armees du Roi en Amerique, partis du Rhedarium, rue du Parc Royal, le Mardi, le trentième de Novembre, mille sept cent quatre quatre.

AUJOURDUI Mardi trente Novembre, le Barometre étant à trente degrés, le Thermometre à cinquante et un degrés de Farenheit, et celui de Reaumur a neuf degrés.

Le Ciel peu nuageux; le vent soufflant Ouest, peu du Nord:

Mr. Blanchard à deux heures, trente minutes après midi, ayant disposé son appareil, et rempli son Ballon à la satisfaction d'une Compagnie brillante; il a hissé le drapeau aux armes de la Maison de Devonshire, et monté dans son vaisseau volant, avec la sérénité qui lui est ordinaire.

Son Compagnon, le Docteur Jeffries, muni du drapeau Anglois, le suivit avec la confiance que pouvoit lui inspirer son pilote.

Presque à midi et trois quarts, les Aéronautes ont arboré leurs pavillons, et après avoir pris congé de l'Assemblée, se sont élevés aux acclamations des Spectateurs: Ce qu'est dument attesté par les signatures suivantes:

Le Comte d'ADHEMAR,	G. DEVONSHIRE	GEORGE P.
Le Ambassadeur de France	H. DUNCANNON	
	ELIZA. FOSTER	
	F. CLERMONT	DEVONSHIRE
	E. HERVEY	
	ANN BOYLE	DUNCANNON

STATE of the Thermometer, Barometer, Hydrometer, and Electrometer, at the time of Ascension; with the several changes during our first Voyage (from the Rhedarium) on the Thirtieth of November, 1784.

Hours	Minutes	Thermometer Degrees	Barometer Inches	Hydrometer Degrees	Electrometer.	
2	20	51	30	0		
2	38	—	—			<i>In the Area of the Rhedarium. Was the Minute of our Ascension over the Buildings around us.</i>
2	45	40	27	0		
2	50	40	26	0		
3	3	35	25	3 dry		
3	8	33	24	0		
3	13	31	23	4 dry		
3	15	29	22 $\frac{1}{2}$	0		
3	17	0	21 $\frac{3}{4}$	0		
3	19	28 $\frac{1}{2}$	21,2 $\frac{1}{2}$	0		
3	20	0		5 dry		
3	25	34	25 $\frac{1}{2}$	0		
3	45	40	27	7 moist		

Though frequently attended to, I never observed to be any ways affected.

A

N A R R A T I V E, &c.

After so many accounts of Aerial Voyagers have been laid before the Public, some apology on my part, for attempting to obtrude the following, seems almost indispensable.

The best in my power to offer, is, to relate in as few words as possible, what were the motives which induced me to solicit the permission of M. Blanchard to accompany him; and my view in publishing the observations I made during our *short voyage*.

The success of the first attempt naturally struck every one with surprize, to find, that what had, from the earliest period of time, been deemed, by most people, impossible; (and every suggestion even of the probability of it, treated but as the dreams of Visionaries) was at last discovered and realized, by visible and unquestionable proofs. But though the surprize was general, its effects were not the same on every one: Some, of a sanguine disposition, were led to expect from it, very great acquisitions and improvements, in almost every branch of useful science; others, of a contrary temper, after joining in the general applause bestowed on the first discoverer, called in question the utility which it might be of, and whether it would serve any other purpose than that of mere amusement.

C

Although

Although I was not so sanguine as the former, yet I was, from the first, of opinion, that this discovery might lead, at least to a full investigation of the nature and properties of the atmosphere which surrounds us, and into which we had hitherto been unable to rise, much above the surface of the earth.

Impressed with this idea, I became attentive to the observations and remarks of those who successively ascended in different countries; but as might be naturally expected, their principal attention was turned to ascertain the facility and safety of an ascent; to the prospects below them, in their elevated situation; to the effects which so sudden a change of situation and air, might have on them personally; and to the power of descending at pleasure, and with safety. It was doubtless essentially necessary, that these points should be ascertained as exactly as was possible, to render future experiments more easy and certain.

The first who ascended, opened and pointed out this new road; and his immediate successors laboured with great merit to themselves, and no inconsiderable success, in removing every obstruction which lay in the way of those whose curiosity might induce them to pursue their track. It then appeared to me, that a new and immense field was presented, in which numbers might engage in one common pursuit, without the least danger of interfering with each other, and I became ambitious of making one of them; sensible that on a subject so new, nothing so much tends to enable us to make up a right judgment, and to come at truth, as a variety of experiments; and that even those who fail, are entitled to indulgence, if not to some share of merit, on account of their motives.

I wished to see the following points more clearly determined :

First, the power of ascending or descending at pleasure, while suspended, and floating in the air.

Secondly,

Secondly, the effect which oars, or wings, might be made to produce towards this purpose, and in directing the course of the Balloon.

Thirdly, the state and temperature of the atmosphere at different heights from the earth: And

Fourthly, by observing the varying course of the currents of air, or winds, at certain elevations, to throw some new light on the theory of winds in general.

I became anxious to contribute my mite towards these important discoveries; until by frequently revolving the subject in my mind, I resolved to gratify this, which had finally become my ruling passion: I accordingly made application to M. Blanchard to indulge me with a seat with him in his next intended voyage; which indulgence I could not obtain of him, but in consideration of one hundred guineas presented him for that purpose.

Unfortunately, in the two preceding Voyages made in this country, it was in the first found impracticable, from the state of the Balloon, for more than one person to ascend; and in the second, although two ascended at first, yet Mr. Sheldon was obliged to alight, before there had been sufficient time for making any material observations; and in both instances the necessary apparatus for making them was left behind; besides, it is easy to conceive, that one person, (however collected, and master of himself he may be from experience or theoretic knowledge, or from both combined) must be too much employed in attending to the state and management of his Aerial Car and Balloon, to have time to make more than transient observations, committed to memory.

As I did not possess any particular skill either in filling or managing the Balloon, and M. Blanchard being an experienced master of both, I was

at liberty to attend solely to my first object; that of making those observations and remarks which I now lay before the Public, simply from a desire of contributing, though in a small degree, to the general collection of entertaining and useful knowledge.

I was so unfortunate as to have many obstacles and unfavourable circumstances to encounter.---

The disorder and mischief occasioned by two unsuccessful attempts, and the damage thereby done to individuals in their property, had made every one who had grounds of their own, or at their disposal, suitable for such an exhibition, in or near the metropolis, resolve against granting the use of them, on almost any consideration; and more than four weeks were lost in fruitless solicitations for a proper place to ascend from. A bare recital of the mortifying refusals and disappointments we met with, would fill a moderate pamphlet; but it is not my intention to lay any thing before the Public, in which they are not, at least in some way interested: It is therefore sufficient to say, that these disappointments were heightened by reflections on the season of the year; the small portion of day-light, which could at best be afforded us; the variableness of the weather; and the extreme uncertainty of our being able to improve even that little proportion for the purposes of our Voyage.---

It may not however be improper to observe here, that it is much to be lamented, that no means have as yet been afforded to defray the necessary expences of such experiments, but by a tax on the curiosity of the Public.

An open, and unincumbered field, and one of the longest and most serene days in the year, are essentially necessary for making any considerable experiments in this way, with certainty; and without running some

some risk of failure, and even of material injury. But such was our situation, that we were obliged to make our ascent from one of the most incommodious areas, or yards, for its extent, that is perhaps to be found in London ; and that on one of almost the shortest days in the year, amidst the fogs and clouds of November.

The dimensions of the Rhedarium, and the incommodiousness of its situation on every account, particularly from the surrounding buildings, are well known.

However, from this unfavourable spot, other difficulties being surmounted, we resolved to attempt our ascent on Monday the 29th day of November, 1784; and to be able to improve as much of the day-light as possible, M. Blanchard had designed to have the Balloon ready filled by eleven in the forenoon : This being settled, I applied myself to prepare such instruments as were necessary for the observations I expected to make: These were--*a Thermometer*; *a Barometer*; one of Nairn and Blunt's pocket *Electrometers*; *an Hydrometer*; one of Mr. Arnold's *Time-pieces*; and *a Mariner's Compass*: Besides which, I took with me a very good Telescope, and several yards of very thin light ribband, coloured, which I could occasionally cut into small bits as I wanted them ; and had ready in my pocket a sharp strong knife and scissars.

I likewise took with me a small phial, two-thirds full of common water ; and six other phials, of four ounces each, fitted with glass stoppers, filled with distilled water, and numbered, to be emptied at different heights in the atmosphere ; and to be afterwards corked up, to bring back samples of the air at different elevations in the atmosphere. These phials I had the honour to be furnished with by the very ingenious and philosophical Mr. Cavendish, through favour of Dr. Blagden, who had kindly suggested this idea to me.--My Barometer was new, and made

for the purpose by Mr. Jones, Optician, in Holborn, and graduated down to *eighteen inches*. My Thermometer was a pocket one, graduated both by *Farenheit's* and *Reaumur's* scale; and the Hydrometer was so far open as to receive the full impression of the atmosphere.

That I might note down my observations with the greater exactness, I provided a blank book of several sheets of paper in quarto, and ruled it into columns: The first to note the hour and minutes of the day; the next, for the state of the Thermometer; then for that of the Barometer; Electrometer; and for transient remarks of what passed.

I did not like to trust to a common pen, or to pencils, they being liable to accidents, and therefore furnished myself with a silver one, which answered my purpose extremely well.

By this arrangement, I could, with the several instruments conveniently placed on the side of me in the Aerial Car, easily take the state of each of them as they varied, and enter it in the proper column: And having prepared cloathing to guard against the severity of the cold which I might have to encounter, I impatiently waited for the day fixed on; which proving uncommonly tempestuous, obliged us to put off our voyage to the next; the morning of which, not promising even so tolerable a day as it afterwards proved, occasioned some delay; and the operation of filling the Balloon was not begun until after eleven o'clock; the time by which it had been completed. And though M. Blanchard exerted his utmost to hasten it; yet, from the awkwardness of the situation, and more so, from that of some of the workmen employed, together with what appeared to me at the time to be designed against our experiment, it was not until after two o'clock that we began to fasten the Car to the Balloon. This, with other things necessary to be done, previous to our setting out, took up some time.

A small Balloon was then sent up to ascertain the course that we probably should take, which appeared to be a little to the southward of East; the wind having, within the last hour, changed from North-West to a little northward of West; and, at the same time, many clouds appeared to be rising, and the atmosphere became much more obscure than it had been the former part of the day.

I had taken as much of a map of England as comprehended as great an extent of the country, in every direction from London, as there was any probability of our passing over, and secured it on a thick pasteboard, that it might lay open before me; but being myself, at that juncture, otherwise engaged, I requested a gentleman of my acquaintance to observe the course of the small Balloon, and to mark it with a pencil; that, by reference to it, I might know, during the time of our Voyage, what part of the country we probably crossed in our passage.

Previous to our entering the Aerial Car, I suspended the Thermometer and Barometer, in the open air, for some time; and on taking them down to fix them in the Car, found the Thermometer was at 51, and the Barometer at 30; and the Hydrometer was designedly placed at 0. I had provided an handsome British Flag, (invidiously misrepresented the next day, in one of the public papers, to have been the Flag of the American States) and M. Blanchard received one from the hands of the Dutches of Devonshire, emblazoned with the arms of that illustrious family; and while he was paying his respects to his Royal Highness the Prince of Wales, her Grace the Dutches of Devonshire, and other noble Personages, who, by their presence, condescended to patronize our Voyage, I was employed in our Aerial Car, in fixing and securing my instruments in the most safe and convenient manner; and at 34 minutes after two, we arose over the railing which had inclosed the apparatus, &c. while the Balloon was filling; and rising a few yards in height, descended near

the center of the area of the Rhedarium; where, affixing to our Car the wings or oars, and other apparatus, we attempted again to rise; but still with cords in the hands of the people on the ground: But finding that we had too much ballast in proportion to the *gaz* in our Balloon, after alighting for a moment, on the pent-house of the stables, on the north side of the Rhedarium, and falling off towards the west end so near, as almost to touch the buildings, M. Blanchard threw out the remaining part of our sand ballast, on which we again rose; when, after striking against the top of a chimney with so much force, as to beat off the earthen funnels on it, (which accident, I imagine was occasioned by the wind suddenly acting on the Balloon as it first arose above the buildings, and before it had acquired a situation to be acted on equally as to its course, or its full velocity of ascent)---at 38 minutes after two, we rose above the reach of any farther terrestrial obstructions.

There was but very little wind on the surface of the ground, at the time of our ascent, or during the first part of our Voyage; but there was apparently more at the elevation which we soon gained. After waving our flags, and the first parting salutations of our friends were over, M. Blanchard applied himself to his oars, which he had made some experiment of on our first ascent, and which (though inadequate to the government of the Balloon) appeared to me very materially to *influence* the course, ascent, and progress of the Balloon; and with which we could, by acting with but one oar or wing, always turn round the Car and Balloon, either wholly or in part, *ad libitum*; which circumstance much increased the pleasure and variety of the magnificent view under and around us: And though my sensations, arising from the mingled passions of joy and exultation, at having at last overcome every obstacle, and become free of a boundless expanse; and from the anxiety of some, and acclamations of others, of the immense body of people below us, are not easily described;

I found

I found myself perfectly collected, and began to attend solely to my first object.

As I had so many instruments to attend to, I gave the Compass to the care of M. Blanchard, and confined myself to observing the variations of the other instruments, and of the majestic and extensive scene before us. Notwithstanding the atmosphere began to be hazy soon after our ascent, still the prospect was vast; and such as cannot be easily conceived by one who has always been attached to the surface of the globe.

In passing over the City, the squares and streets were full of people, with their eyes all turned towards us, and who, as we ascended, gradually diminished to our view into mere pygmies, and then disappeared entirely.---Our course appeared to me to be nearly in a right line over the City, tending a little to the southward of East.---M. Blanchard had taken with him a number of quarto pamphlets; these he threw out at different moments in passing over the City; and from the different parts in which it was said they were picked up, one might conclude the contrary, and that our course was very irregular: But a pamphlet or sheets of paper loosely tacked together, in descending from a great height, will, from the fluttering of the leaves opening and shutting continually in their descent, take many different directions. I apprehend, therefore, no certain conclusions can be drawn from this circumstance alone.

In about six minutes from our ascent from the Rhedarium, St. Paul's appeared much diminished to my view, and to be a little on our left; seeming to be chiefly lost under the fogs and clouds that hung around and over it, which in a minute or two made the dome appear to me like a bell suspended in the air, it not appearing to have connection with any prop or support under it.---At this time, 45 minutes after two, the mercury in the Thermometer had fallen to 40, and that in the Barometer to 27;

and, in about three minutes, we appeared to cross the river twice At 50 minutes after two, the Thermometer continued at 40, but the Barometer had fallen to 26. At 51 minutes after two, I threw out an handkerchief, as a signal to my friend Mr. Thayer, which I was able to keep sight of for more than two minutes, and it appeared very pretty in its descent, seeming to run after us. We had now got quite above the fogs and clouds, which at this time appeared to be in general below us; some few were near and around us, which seemed to be falling from under us into some other world. A lovely azure blue above us opening a very extensive prospect in all directions. At 55 minutes after two, I emptied the phial, No. 6, and carefully corked it up. At 59 minutes after two, we passed over what appeared to me to be a pavement; but which, upon examining with my prospect-glaſs, I was surprized to find, were the tops of a forest or wood. At this time the rays of the sun appeared very beautiful in their course over some parts of the earth, but were intercepted from reaching us, by intervening clouds, in the course of their direction towards us. M. Blanchard threw out a few more of his pamphlets; and I, at this time, amused myself in writing four cards, addressed to some friends; each of which I attached to an handkerchief, and at different periods afterwards cast out of the Car; and have since had the pleasure to know, that three of them were taken up at different places, and kindly forwarded, and received by those to whom they were addressed.

At 3 minutes past three, the Thermometer had fallen to 35, and the Barometer to 25; and the Hydrometer had changed from 0 to 3 degrees dry: In five minutes after, the Thermometer fell to 33, and the Barometer to 24; at which time I emptied the Phial, No. 1, and carefully secured it.

At

At this time, the ships, &c. on the River Thames appeared like very small shallopS or canoes, in a narrow foggy creek ; and we appeared to cross the River again.

Upon examining the Compafs, to try to find our course, I was surprized to find the needle changing, and appear to be running all around the card, almost continually. The earth now appeared to be exactly like a beautiful coloured map or carpet, not having the least appearance of hill, elevation of buildings, or inequality of surface whatever ; but almost continually changing its position, as to the prospect before me, owing, I apprehend, to the almost incessant *rotary* and *semicircular* motion of the Balloon around its own axis. The clouds now seemed to have fallen greatly below us.

The map which I took with me was so slightly dotted with the pencil, that I did not perceive the marks, and having other objeCts to attend to, I laid it by; but, on my return, and examining it, I found that the line drawn on it, by the gentleman who observed the course of the small Balloon, passed almost directly over the spot where we finally landed ; which circumstance induces me to think that we did not make any great variations in our course.

Had we been so fortunate as to have enjoyed a clear sky, we must now have been indulged with the most magnificent prospect in the world ; for, passing over London in its longest direction, and for twenty miles within view, and almost directly over the Thames, the greatest and most opulent City in the world, with its thousands of ships (almost covering the River Thames) the great sources of its wealth and importance, and the fertile banks of the River, with the populous villages and superb villas in its neighbourhood, would have been before us in one bird's-eye view, as it is called ; but although the haziness of the atmosphere deprived us of

part of this vast scene, yet until we rose so high that the fogs and clouds intercepted our view (which was not until we had passed some distance to the East of the City) the prospect was sufficient to absorb the whole of my attention, and to make me, for the time, lose all thought of my own situation ; and had I been ever so apprehensive, it was sufficient to have calmed every uneasiness of mind : But from my first engaging to embark with M. Blanchard, my confidence was such as to prevent my having any apprehensions for the consequences.

M. Blanchard (as soon as our parting salutations to our friends below us were over, and their shouts and acclamations, which at first almost deafened us, had died away into an indistinct and distant murmur, applied himself with great adroitness to his oars or wings, which appeared to have a sensible effect, particularly on our ascent ; and when designedly exerted against our progress, rendered us in some degree stationary, much beyond what I could have imagined ; and during our whole voyage convinced me, that with some future improvements (which I do not at present presume to point out) they may be of material service, not only in aiding the ascent or descent of a Balloon, but in directing its course, especially whenever the wind is not strong.

It appears to me but reasonable to suppose, that a Balloon launched into the air when the wind is violent, or even strong, will, on its rising to a certain height, be more likely to meet with a proportionably strong counter current of air, and tack many points, or almost directly about, and stand quite a different course, than when it ascends in but a small breeze or light wind: But I submit this to the determination of others, with observing, that experience has hitherto been in favour of this hypothesis ; which, if it be well founded, those who wish to go a great distance, in any particular course, with a Balloon, should set out when the wind blows directly to the place of their destination, and ballast their Balloon
so

so that it will not rise above a certain height; little more than to keep above every thing which might obstruct their course.

On our ascending from the Rhedarium, though we had taken but a small quantity of ballast, we were obliged to throw out a considerable part of it before we could ascend; by which little was left us to be thrown overboard, if we found a necessity of lightening.

I have already mentioned, that at eight minutes after three, the Thermometer was at 33, and the Barometer at 24; the Electrometer was not in the least affected. At this time the City of London, the River Thames, and the shipping on it, were scarcely discernible by the naked eye; and indeed barely to be distinguished by a prospect-glass, from other parts of the surface of the earth; which, as far as our horizon extended, was to our view one extensive plain, and appeared variegated like a coloured map or carpet.

We still continued to ascend, and soon lost sight both of sun and earth, by the intervention of fogs and clouds, which appeared rolling beneath us in different directions, like columns of smoke or steam; but at times, as they opened, we could catch a transient view of the earth, illuminated by the rays of the sun; at which time the River Thames appeared by my prospect-glass like a small creek, running through a foggy tract of ground.

M. Blanchard now began first to complain of the cold, and drew on a thick cap. A little dog which I had taken with me, crumpled himself up at my feet, and began to shake and shed tears with the cold, which I found to be severe, and caused a pain and singing in my ears; on which I followed M. Blanchard's example, and put on a fur cap, which in a great measure relieved me. We then threw over more of the pamph-

Iets, and sundry other little articles. The Balloon, which at our ascent was very imperfectly filled with gaz, and was of a conical figure, now became distended to nearly circular, and drew up our Car closer to it. I at this time urged M. Blanchard to continue our ascent as long as it could be done with any degree of safety; to which he consented, and we rose accordingly.

At 13 minutes after three, the Thermometer was at 31; the Barometer at 23; and the Hydrometer at four degrees dry, and the cold intensely severe. At 15 minutes past three, the Thermometer was at 29; the Barometer at $22\frac{1}{2}$. At 17 minutes after three, the Barometer was at $21\frac{3}{4}$; the Balloon at this time nobly distended; our Car drawn up close to it; and we seemed to be going faster than before. At 20 minutes past three, the Thermometer was at $28\frac{1}{2}$; the Barometer at $21, 2\frac{1}{2}$; and the Hydrometer continued at four degrees dry.---Here the sky appeared perfectly clear above us, and of a beautiful azure blue; but the body of the sun was totally hid by clouds. I then emptied two of the phials, No. 2, and No. 5, and secured them as the others. My feet were painful with the cold; the clouds appeared floating far below us; and on their opening we could scarcely distinguish the earth.

At 23 minutes after three, the Balloon became quite distended, and seemed to labour, when by throwing over some pieces of ribbands, I judged that we were still ascending: On which we untwisted both tubes of the Balloon, (through which it had been filled with gaz) and put them without-side of the Car, and opened the valve, to ease the Balloon, and to favour our descent. At this time we began to have a beautiful view of some more extensive water than the Thames, that appeared to be before us, a little on our right, which I imagined to be the River Medway, or thereabouts; but I could not keep it in view more than a few minutes.

The

The *gaz* escaped faster than we imagined, for in about five minutes the mercury in the Thermometer arose to 34, and that in the Barometer to $25\frac{1}{2}$, from $21,2\frac{1}{2}$, the lowest point it had been at.

We now refreshed ourselves with cold chicken, and drank a few glasses of wine to the health of our friends below us; after which I emptied the phial, No. 3, and secured it.

At 40 minutes after three, we appeared to approach the River, the ships on it being in full view; and the objects below us every moment increasing in size; when, finding our descent more rapid than we designed or expected, we took in and fastened both tubes, having previously closed the valve before we began to take refreshment. Objects on the earth now became distinguishable, and we passed over between two villages, which, as I have since found, were Dartford and Crayford. From the appearance of the earth, with its groves, and the buildings on it, as if flying swiftly to meet us on our return, we found that too great a portion of *gaz* had escaped; and having little or nothing left, by the discharge of which, (as ballast) our descent might be checked, our situation became, in some degree, critical, and the more so, as our horizontal motion was accelerated by the wind; and we were approaching the banks of the River, where its course for several miles was nearly the same as ours at that time appeared to be. We then threw out every thing except my instruments and our cloaths; and though this visibly checked our descent, yet it had no effect on our motion, in a right line for the River.

At 45 minutes past three, the Thermometer had risen up to 40, the Barometer to 27, and the *Hydrometer* had *changed*, and got to *seven degrees moist*.

At about 50 minutes past three, we cast out one of the anchors, or grapnels, and in two minutes after, the second, which as soon as it touched the surface of the earth (the cords by which they were attached to the net over the Balloon being 50 yards in length) checked us so far, that we struck the ground lightly, but rebounded; and ascending again, we opened the valve; but passing between the tops of some trees, they forced off, and carried away from the Car, our moulinet, with one of the oars or wings; indeed we met with such resistance, as to break off many of the twigs and berries, and to force some of them into my cloaths, pockets, &c. I caught hold of the limb of one of the trees, in hopes of stopping our motion, but was unable to do it; and was forced, after exerting my utmost efforts, to let it go, when I found my arms strained by my exertions. As soon as we had passed the trees, the wind blowing fresh, our anchors were every minute taking the ground, so as to check us, and then giving way, so that we alternately fell and rose; when a man, by hard running, got hold of one of the cords of our anchors, but could not stop us: On which we opened the valve as far as it was possible, and kept it open until several persons coming up with us, and seizing hold of both the anchor cords, stopped our progress; and we alighted exactly at 59 minutes after three, in a marshy piece of ground, within a few rods of the River, just one hour and 21 minutes after our ascension above the buildings of the Rhedarium, &c. This was, or at least it appears to me to have been the only real danger we encountered in our voyage, and which, I doubt not, we might have got through without material damage, even if we had not met with the assistance above mentioned; for, by closing the tubes and valve, and throwing out our cloaths, &c. (which I was preparing for) the *gaz* still retained in the Balloon would have been sufficient to bear us above the surface of the water, until we could reach the opposite shore, which, though distant, we should probably have gained in a few minutes by the wind, as it then blew a fresh breeze. I am the more confident of this,

as

as it required the strength of several men to keep the Balloon down and steady, after our alighting, and while the remainder of the gaz was forced out from it.

The neighbouring inhabitants soon flocked about us, asking thousands of questions; and finding in the bottom of our Aerial Car a few bits of chicken, and morsels of bread, I, at their urgent requests, divided it almost into atoms among them; every one being eager to get some of that food, which they had seen literally descend from the clouds.

I found myself, from the cold I had experienced, and my struggling to stop our course when passing through the trees, a little fatigued and feverish; but a bowl of warm tea set me right, and I felt no further inconvenience than the soreness of my arms, which lasted for a day or two after.

The gradual appearance of objects, with their unfolding, and becoming distinct from one general mass, in which they had appeared to me when at a great height, was a very entertaining sight, and would have been more so, had our descent been less rapid.

The extensive grounds of a Callico-Printer, covered with cloths of various colours, at my first observing it, appeared like a bed of tulips, which, when I remarked to M. Blanchard, he was struck with the same idea.

In the course of our descent, passing through a cloud, or foggy vapour, the Hydrometer, which had, during the course of our Voyage, been gradually declining from 0 (where I had placed it at setting out) to five degrees dry, had, when I examined it during our descent, changed to *seven* degrees moist.

The *Electromeier*, which I had repeatedly examined, and attended to, I could never discover to be affected.

The small phial of common water, which I had suspended on the outside of our Car, was lost, I judge, when our Car was forced through the trees, or from the violence of some of the shocks when the Car repeatedly struck the ground, and rebounded again; at which time it is probable all the phials would have been broken, if I had not secured the basket that contained them, by suspending it loose in my hand.

We were, as may naturally be supposed, most hospitably received, entertained with every thing the country afforded, and welcomed with sincere joy, heightened by admiration. We supped and lodged at the Bull Inn, at Dartford, the Master of which, Mr. Wharton, with some of the neighbouring Gentlemen, treated us with a disinterested hospitality, which did them honour; and the next day we returned to town.

Although our Voyage was not distinguished by the length of time we were in performing it, or the distance we went, yet I cannot but hope that the foregoing observations may be of some importance; and in relating them I have adhered to simple facts as they occurred, or as they appeared to me; the inferences, or conclusions which may be drawn from them, I leave to be formed by my superiors in philosophical enquiries and reasonings. I gave but little attention to the Compafs, after what I had observed of it; for without any fixed object in view, I conceive it must be very difficult to ascertain the course of a Balloon.

The passengers in the Car are so insensible of the motion, however rapid, that but from the disappearance, or diminution of objects they are leaving, or from the rising or falling of the mercury in the Barometer, they would be led to think themselves stationary; and in such a case no judg-

judgment can be formed of their course by the Compafs : This difficulty I foresaw, but had not time to remedy it.---My intention was to have taken up several balls, both white and black, so ponderous as to descend perpendicularly, but not so rapidly but that the eye might follow them for a few seconds ;---or pieces of coloured cloth, specifically heavier than the Balloon : By the throwing over of which, and a reference to the Compafs, preventing at the same time the rotary motion of the Balloon and Car, by the use of oars or wings, it appears to me practicable to ascertain the course with sufficient precision.

But, as I am of opinion, (from the course of the wind the whole of that afternoon, and from the place of our landing, near the Thames, in the parish of Stone, in the county of Kent, being nearly in the same direction from London) that we did not materially vary our course, I have the less to regret on account of this omission in the present instance.

Perhaps the varying degrees of dryness shewn by the Hydrometer at different heights in the atmosphere, may, aided by future observations, lead to determine, with some precision, at what distance from the earth particles of water are raised, and float in any quantity.

The different heights of the mercury in the Thermometer and Barometer, and the state of the Hydrometer, were taken and minuted with careful exactness ; and the heads or substance of the above-mentioned remarks were noted in my column, for that purpose, on the spot, and at the instant mentioned: Besides which, I made many more, for my own amusement, at the time, and to divert my friends with on my return ; but as the Public are no way interested in them, it would not become me to mention them here.

This discovery of Aerial Navigation is of so recent a date, that it is still but in its infancy; and every new experiment can hardly fail of helping, in some degree, to improve and bring it forward towards that state of perfection, at which it may be reduced to a certain system, and to regular practical rules and directions for every part of it.

In the mean time I must beg leave to observe, that from less than an hour and an half of a Winter's afternoon, but little can be expected; and that, to make experiments in this way useful, the longest days in Summer ought to be improved. The Balloon should be launched by six or seven in the morning, and supplied with such a proportion of gaz and ballast, that those who ascend with it may not be under any necessity of descending, but on the approach of night.

Some persons apprehend danger at that season of the year, from meeting with clouds highly charged with the electrical fluid. How far this danger may be a real one, I do not presume to decide; for, although the Electrometer did not appear to be in the least affected, during our suspension in, and progress through the atmospere, I cannot think that any conclusion ought to be drawn from a single experiment, made at so unfavourable a season of the year.

On my return to town, I sent five of the six phials of air (which I had been entrusted with procuring) to Dr. Blagden, Secretary to the Royal Society, who had first suggested to me the idea of taking them with me. And here I should do violence to my own feelings, if I omitted to mention the good and careful conduct of M. Blanchard, as an Aeronaut; or to return my most grateful thanks to the many respectable persons who interested themselves in my safety, and who wished me success.

I have

I have indeed but partially satisfied myself as to the objects which I had in view, when I undertook this Aerial Voyage; and I cannot but think I should have succeeded much better, had it not been for the unfavourable circumstances already mentioned. As the Winter likewise seems to be an improper season, especially in this climate, for experiments of this nature, I must take the liberty to hope, that if it be thought they may be improved for the discovery of useful knowledge, some plan may be struck out between the present time and the ensuing Summer, for making a succession of them for that purpose, without obliging an individual to be at the first expence ; and then to tax the curiosity of the Public for his reimbursement ; as it may be presumed that the force of this is now greatly abated. An open place, such as Hyde-Park, or Kensington-Gardens, may be chosen, where any number of people may be gratuitously indulged with a view, without crowding on the workmen, and impeding the operation of filling the Balloon, which must ever be the case in small inclosures. Besides these inconveniences, their being generally surrounded by lofty buildings occasions another impediment, equally prejudicial to fair experiment.

The Balloon, in such a situation, must rise almost in a perpendicular direction, to clear the tops of the surrounding buildings. This is always attended with some risk ; and besides other disadvantages, prevents those who ascend from taking with them such a quantity of ballast as is necessary to aid them when they wish to rise, by discharging a small part of it ; and when they are desirous of descending, may enable them to do it as gradually as they can wish for.

It must be evident, that an ascent on an angle of not more than 40 degrees, is much preferable to one perpendicular, or near it ; and tho' much may be done by means of wings, or oars, in ascending or descending, when the Balloon becomes nearly equipoised, or is moving with

but a moderate velocity; yet the only certain dependence (during our present imperfect knowledge respecting them) in all cases which may occur, must be placed on the quantity of gaz or inflammable air contained in the Balloon; and of ballast with which the Car is loaded at its first rising from the ground.

Five or six experiments made at that season of the year, when those who ascend may have twelve or thirteen hours of day-light before them, would perhaps do more in ascertaining the purposes to which this extraordinary discovery may be applied, than hundreds attended with the present inconveniences and embarrassments.

If the above suggestions should be thought well founded, the expence can be no great object, when shared by even a small proportion of the wealthy and public-spirited people of this country. It would not, probably, amount to one half the sum which the Public, within a few months past, have paid for the sight of a Balloon only, filled with common air, and suspended by cords to a ceiling.

MARGARET-STREET,
CAVENDISH-SQUARE, }
Dec. 8, 1784.

END OF THE FIRST VOYAGE.

PROCES VERBAL DE DESCENT, &c.

MARDI, environ sur les trois heures et demi après midi, sont passés au dessus de cette ville deux Voyageurs Aériens, portés dans un Ballon. Ils s'y sont arrêtés pendant quelques minutes, et ils étoient à une élévation considérable. Le Ballon nous a paru de la grosseur d'uu demi-muid. Il descendit ensuite fort rapidement dans un marais, appartenant à M. Russell. M. Blanchard, et M. le Docteur Jeffries sont débarqués, tranquillement, à trois heures et trois quarts, dans la paroisse de Stone, près de Dartford, dans le comté de Kent. Après avoir, en notre présence, faits plusieurs evolutions, comme monter et descendre plusieurs fois, pour éviter les arbres, et les maisons; ils nous ont paru choisir la place, qui leur étoit plus convenable, proche de la Tamise.

En foi de quoi, nous avons signé le present Proces-verbal, ce jour, trente Novembre, 1784.

. ANN TANKARD	
WM. COLLINS SHORTER,	
Surgeon	
ELIZABETH DEAN	
MARY OBWELL	
JOHN WOOD, Farmer	

RACHEL BREWER	
R. BUCHANAN, Printer,	
Crayford	
WM. RICHARDSON, Sur-	
geon, Dartford	
ADAM CALLOW, Draper,	
Dartford	
MARK CALLOW, Junior.	

S E C O N D V O Y A G E,

ON THE SEVENTH OF JANUARY, 1785,

FROM THE

CLIFFS OF DOVER, NEAR THE ROYAL CASTLE,

ACROSS THE BRITISH CHANNEL,

INTO THE

FOREST OF GUINES, IN THE PROVINCE OF

ARTOIS, IN FRANCE:

In completing which, we were suspended, and floating in the Atmosphere, two Hours over the Sea; and forty-seven Minutes over the Land of France.

TO HIS GRACE
THE DUKE OF DORSET,

&c. &c. &c.

MY LORD DUKE,

MAY it please your Grace favourably to accept this feeble testimony of my sincere veneration, and of the grateful sense I retain of the condescending attention with which you kindly honoured me at Paris.

On your Grace's candour I rely to excuse me, if I have too presumingly erred, in thus publicly addressing you.

Permit me to assure your Grace, that, however I may have hitherto failed of that patronage here, which you so benevolently designed me, I shall ever cherish and preserve the flattering remembrance of your liberal intentions towards it.

Allow

(36)

Allow me likewise to assure your Grace, that I look upon my introduction to *your* notice, as one of the most fortunate events of my enterprize; especially, as it affords me the present opportunity to subscribe myself,

MY LORD DUKE,

Your Grace's

Most obliged,

MARGARET-STREET,
CAVENDISH-SQUARE,
March 13, 1786.

And most obedient,

Humble Servant,

JOHN JEFFRIES.

*PROCES Verbal du Départ de M. Blanchard et M. le Docteur Jeffries,
du Chateau Royal du Douvres, pour se rendre sur le Continent.*

AUJOURD'HUI, sept Janvier, 1785, le Baromètre étant à 29 pouces, 7 lignes, le ciel beau et clair, le vent soufflant Nord demi Rhum-Ouest, M. Blanchard, après avoir disposé son appareil, et rempli son Ballon avec la plus grande celérité, est monté, accompagné du Docteur Jeffries, dans son vaisseau volant. La serenité empreinte sur le visage de cet Artiste, courageux et éclairé; le sang froid admirable, et la confiance de son Compagnon, ont pu à peine rassurer les Spectateurs nombreux que cet evenement interessant avoit rassemblés pour être temoins du triomphe de ces intrepides Aeronautes, qui après avoir pris congé de l'Assemblée, s'élevèrent majestueusement aux acclamations unanimes d'une multitude immense, qui remplissoit le chateau, et couvroit le rivage à une heure.

En foi de quoi ont signé les personnes suivantes :

JOHN MINOT

PETER FECTOR

THOMAS HYDE PAGE, Bart.

&c. &c. &c.

J. B. LANE, Dep. Lieut. of
Dover Castle

JAMES CAMPBELL, Captain
69th Regt.

ARCH. CAMPBELL, Captain
69th Regt. &c. &c. &c.

N A R R A T I V E

O F T H E

S E C O N D V O Y A G E

THE foregoing Narrative, &c. I had drawn out rough from my original minutes (made during our experiment) a few days after my return to town, from our Voyage; but being at that time much taken up by various avocations, and having almost immediately engaged in another Aerial Experiment, designed from the Royal Castle of Dover, across the British Channel, into France, the necessary attention in making preparations and arrangements for that plan (*which I had wholly taken upon myself to do*) put it out of my power to copy, or attend more to it at that junc-ture; which circumstances, although they deprived me of the honour of presenting it in December last, as I had intended, yet I hope may plead some apology for my then omission. And since my return from France, I have been again prevented from complying with my inclinations, by a variety of unexpected embarrassments and attentions, which have hitherto hindered me; but which I hope in some degree to compensate for, by annexing a brief account of my last Aerial Voyage, with a few observations, tending to confirm those made in my former one; together with some which had not before occurred, or been noted by me.

Having agreed with M. Blanchard (in consideration of my engaging to furnish him with all the materials and labour to fill the Balloon, and to

pay all the expences of transporting them) that I should accompany him in his intended Aerial Voyage from Dover into France, we left London for that purpose, December the 17th, 1784; having previously shipped for Dover the Balloon and Car, with materials and apparatus for filling the Balloon.

From the necessary time taken up in repairing and adjusting our apparatus, &c. and after that was completed, from a series of intemperate and tempestuous weather, we never had a possibility of making our attempt until the seventh of January, 1785, when, after having encountered, almost from the hour of my arrival at Dover, a variety of discouragements and oppositions to the accomplishing my design,* the weather being more favourable, we determined to proceed, by filling the Balloon, and attempt our enterprize.

The whole of the week, but more especially the preceding day, the weather had been very tempestuous, with strong winds and rain from the Eastward and Northward, which changed in the course of the evening to North, and became very severely cold.

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* After various artifices (one of which was secretly to increase the weight of M. Blanchard, by loading him with a concealed heavy girdle) had been *clandestinely* attempted to deceive, deter, and prevent me from this enterprize, and to prejudice the minds of some of the principal Gentlemen of the County of Kent, and of the City of Dover, insinuating, that from the incapacity of the Balloon, it was madness to attempt the experiment with two persons, unless the Balloon could carry an hundred pound weight of ballast. The pretended friends of M. Blanchard, his Countrymen, publicly circulated such reports of my having *declined* the enterprize, as occasioned my being repeatedly insulted while preparing for our experiment.

A misrepresentation of my conduct was in like manner conveyed to the Governor of Dover Castle, who very politely paid me a visit, to enquire into the truth of my supposed prudent intention of leaving M. Blanchard to pursue his Voyage alone, which brought on an explanation, that obliged me, though

The morning was remarkably fine, clear, and serene, but with intense frost. The wind, as far as it could be ascertained, appeared to be about North North-West, or North-West by North ; but of that kind which the pilots said did not extend far from the shore ; and that the wind usually prevailed in such weather and seasons, and *probably did then prevail*, on the French coast, equally *from that land*, and *in a direct contrary course from what it then appeared to be at Dover*; as at this time there was not wind enough to determine any thing by boats or shipping. I was somewhat embarrassed at this idea *from professional men.*

However, observing very light scudding clouds above, which appeared to take a proper direction for our Voyage; and noticing, at the same time, that smoke from the Castle did the same, we determined to proceed accordingly ; when having raised a paper kite, and launching a paper Mongolfier, and a small gaz Balloon, each of which took, as far as we could trace them, a course favourable to our Voyage, we began to entertain more confidence of success.

though very reluctantly, to state to the Governor the circumstance of my having repeatedly relieved M. Blanchard from his distresses in London, and enabling him *to pursue this experiment*. The agreement subsisting between us, together with the solemn engagement I had made him, that in case of necessity on our passage, *I would get out of the Car for his preservation*; and at the same time to assure the Governor that I was resolved to undertake the Voyage at all events, without M. Blanchard, unless he thought proper to accompany me, without farther artifice or objection ; as I was fully satisfied of the practicability of the plan. M. Blanchard was then called into the room at my desire, and my intentions made known to him ; when, the Governor being now satisfied, (not only by the written agreement, &c. I produced, between me and M. Blanchard, but by his own confession that I was at the whole expence of the experiment) from that moment gave me every assistance in his power as Governor of the Castle, and shewed me many marks of civility and attention, which I take this opportunity gratefully to acknowledge; and likewise my obligations on the same account to Captain Campbell, Lieutenant Crofton, and the other Officers of the 69th Regiment; to Sir Thomas Hyde Page, Bart. to Mr. Fector, Mr. Biggs, and other Gentlemen of Dover.

The Balloon being filled a little before one o'clock, we suffered it to rise, so as to be disengaged from the apparatus, &c. for filling it, and to be drawn down again just at the edge of the Cliff, where we attached the wings or oars, with the moulinet and governail, to the Car:----- And exactly at one o'clock (having in the Car with us, three sacks of sand ballast, of ten pounds each; a large parcel of pamphlets, two cork jackets, a few extra clothes of M. Blanchard; a number of inflated bladders, with two small anchors or grapnels, with cords affixed, to assist our landing) we rose slowly and majestically from the Cliff, which being at the time of our ascent from it almost covered with a beautiful assembly from the city, neighbouring towns and villages, with carriages, horses, &c. together with the extensive Beach of Dover, crowded with a great concourse of people, with numbers of boats, &c. assembled near the shore, under the Cliffs, afforded us, at our first arising from them, a most beautiful and picturesque view indeed.

On this experiment I did not take with me any other philosophical instrument, but my Barometer and Mariner's Compafs.

At the instant before we rose from the Cliff, the mercury in the Barometer was at 29 inches, seven-tenths; and the wind appeared to be about North North-West, though so much of a calm, as to make the sea appear like a fine sheet of glass.

At a quarter past one o'clock we appeared to have risen considerably, but yet to have made very little progress, and that rather to the Eastward. The weather continued delightful, and we began to have a most enchanting prospect of the distant country back of Dover, &c. enjoying in our view a great many towns and villages; among which I could

could distinguish the venerable City of Canterbury; but as a counterpart to this pleasing scene, we began to have a very extensive and formidable view of the Breakers, (I judge around the Goodwin Sands) and which we unfortunately seemed to be approaching.

The mercury in the Barometer had now fallen to 27 inches, three-tenths, and we passed over several vessels of different kinds, which saluted us with their colours, as we passed them; and we began to overlook and have an extensive view of the coast of France; which enchanting views of England and France being alternately presented to us by the rotary and semicircular motion of the Balloon and Car (a circumstance mentioned in our former experiment) greatly increased the beauty and variety of our situation.

At half past one o'clock, the Balloon seemed to be distended to its utmost extent, and thereby (as in our former experiment) drew up the Car close to it; on which occasion, recollecting the importance of a sufficiency of inflammable air, to the completion of our Voyage, and that it was not possible to determine exactly, how much of it might escape if we opened the valve, we *only untwisted the two tubes at the bottom of the Balloon*, by which it had been filled with the gaz, and cast them over the sides of the Car; and in a minute or two we had the pleasure to see them become distended through their whole length, beginning at the ends attached to the Balloon. We also had the farther satisfaction to observe, that by this method, no more of the gaz or inflammable air would escape, than was absolutely necessary to relieve the Balloon, and to prevent it from bursting. This period we employed in attaching the bladders we had taken with us, to the circular hoop between our Car and the Balloon.

At 50 minutes after one, (having, I judge, been too inattentive to the state of the tubes on the outside of the Car) I found we were descending fast. We immediately took in the tubes within the Car, and secured them, and cast out one sack of ballast; but the mercury in the Barometer still rising, we cast out half another sack; on which we began to rise, and the mercury again to fall in the Barometer.

We appeared at this time to be about one-third of the way from the English towards the French coast.

We now began to lose all distinct view of the Castle of Dover. At two o'clock we attached two small slings to the circle over us, towards each end of the Car, and a third in the middle of it, a little lower than the other two, to rest our feet upon; the three being designed to favour our beaver, like retreat upwards, in case we were forced down into the water.

We now found that we were descending again; on which occasion we were obliged to cast out the remaining sack and an half of ballast, sacks and all; notwithstanding which, not finding that we rose, we cast out a parcel of the pamphlets, and in a minute or two found, that we rose again; and now appeared to be about mid-way between the English and French coasts.

At about a quarter after two o'clock, I found that we were again descending; this induced us to cast out, by small parcels, all the remaining pamphlets; notwithstanding which, I could barely discover that we rose again.

We had not now any thing left to cast away as ballast in future, excepting the wings, apparatus, and ornaments of the Car, with our cloaths,

cloaths, and a few little articles; but as a counterpart to such a situation, we here had a most enchanting and alluring view of the French coast, from Blackness and Cape Blanez to Calais, and on to Gravelines, &c.

At about half past two I found we were again descending very rapidly, the lower pole of the Balloon next us having collapsed very much, so, that the Balloon did not appear to be three-fourths distended with gaz. We immediately threw out all the little things we had with us, such as biscuits, apples, &c. and after that one of our oars or wings; but still descending, we cast away the other wing, and then the governail; having likewise had the precaution, for fear of accidents, while the Balloon was filling, partly to loosen and make it go easy, I now succeeded in attempting to reach without the Car, and unscrewing the moulinet, with all its apparatus; I likewise cast that into the sea---Notwithstanding all which, the Balloon not rising, we cut away all the lining and ornaments, both within, and on the outside of the Car, and in like manner threw them into the sea; after which, we cast away the only bottle we had taken with us, which in its descent appeared to force out a considerable steam like smoke, with a hissing or rushing noise; and when it struck the water, we very sensibly (the instant before we heard the sound) felt the force of the shock on our Car; it appearing to have fallen directly perpendicular to us, although we had passed a considerable way during its descent.

As we did not yet ascend, we were obliged, though very unwillingly, to throw away our anchors and cords; but still approaching the sea, we began to *strip ourselves*, and cast away our cloathing, M. Blanchard first throwing away his *extra coat*, with his furtout; after which I cast away my *only coat*; and then M. Blanchard his other coat and trowsers: We then put on and adjusted our cork-jackets, and prepared for the event.

We appeared at this time to be about three quarters of the distance towards the French shore, and we were now fallen so low, as to be beneath the plane of the French Cliffs. We were then preparing to get up into our slings, when I found the mercury in the Barometer again falling, and looking around, soon observed that we were rising, and that the pleasing view of France was enlarging and opening to us every moment, as we ascended, so as to overlook the high grounds.

I judged that we were at this time about four or five miles from the shore, and appeared to approach it fast. We soon had a fine view of Calais, and a great number of other towns, villages, villas, &c.

We now ascended to a much greater height than at any former period of our Voyage, and exactly at three o'clock we passed over the high grounds between Cape Blanez and Blackness ; thus forming in our ascending entrée a most magnificent arch ; at which time, nothing can exceed the beautiful appearance of the villages, fields, roads, villas, &c. under us, after having been just two hours over the sea.

The mercury in the Barometer had now fallen to 23 inches, three-tenths ; at which time a packet of letters, cast out by M. Blanchard, was several minutes in reaching the surface of the earth, and afforded an amusing scene to us, in observing it during its descent ; it appearing, in its progress, to pass along over inclosures, houses, roads, &c. as if running after us ; and finally settled in a field, in a straight line perpendicular to us.

From this circumstance of the manner of the descent of the packet, I am led to suspect, that my idea of taking the balls with me, to assist (by their descent) the Compass in determining our course, was a mistaken one ;

one; and to apprehend that I should not have derived from them that assistance which I sought.

The weather still continued fine, and very clear; the rays of the sun, though almost horizontal, shining very bright; but from the height which we were now at, and from the loss of our cloaths, we were almost benumbed with cold.

By our velocity, the wind seemed now to be considerably increased; and from our course I judge it must have been more westerly than before, as we appeared to be approaching fast to the grounds covered with water on our left, above, and a little to the right of Calais; but in a few minutes, I perceived that we had again changed our course, which was now towards the South-West, and that we were gradually descending; to favour which, we untied our slings, and took off our cork-jackets, (being the only things we had then left, excepting the Barometer) to cast away as ballast occasionally.

We now found ourselves approaching towards a forest, which appearing to be more extensive than it was probable we should be able to pass entirely over, we cast away one cork-jacket, and soon after the other, which almost immediately checked, and altered the angle of our descent. We had now approached so near to the tops of the trees of the forest, as to discover that they were very large and rough, and that we were descending with great velocity towards them; from which circumstances, and from the direction of our course at this time, fearing that the Car might be forced into some of the trees, so violently as to separate it from the cords that connected it with the net which covered the Balloon, I felt the necessity of casting away something, to alter our course; happily (it almost instantly occurred to me, that probably we might be able to supply it from within ourselves), from the recollection that we had drank much at

breakfast, and not having had any evacuation; and from the severe cold, little or no perspiration had taken place, that probably an extra quantity had been secreted by the kidneys, which we might now avail ourselves of by discharging. I instantly proposed my idea to M. Blanchard, and the event fully justified my expectation; and taking down from the circle over our Car two of the bladders, for reservoirs, we were enabled to obtain, I verily believe, between five and six pounds of urine; which circumstance, however trivial or ludicrous it may seem, I have reason to believe, was of *real utility* to us, *in our then situation*; for by casting it away, as we were approaching some trees of the forest higher than the rest, it so altered our course, that, instead of being forced hard against, or into them (as at that instant appeared probable that we should be), we passed along near them in such a manner, as enabled me to catch hold of the topmost branches of one of them, and thereby arrest the farther progress of the Balloon, which, almost the instant the Car touched the trees, so as to take off a part of its weight, was disposed to ascend again; and in that position continued for a considerable time, waving over our heads, making a very pretty appearance above the woods, until, having for some time held the valve open, a sufficiency of gaz had escaped, to dispose the Car to settle on the branches, when, by disengaging, and pushing it from one to another, we found a sufficient space between the trees to admit us to descend tranquilly to the surface of the ground, a little before four o'clock, it having been about half after three when I first stopped the progress of the Balloon over the forest; which I have since been informed, is called the *Forest of Guines*, not far from *Ardres*, and near the spot celebrated for the famous interview between Henry the Eighth, King of England, and Francis the First, King of France.

We instantly set about emptying the Balloon, and used every other exertion to acquire some warmth, and recover the use of our limbs, which were

were much cramped and stiffened from cold, and the situation we had been confined to in our Car.

In a short time many persons made their way to us in the Forest, from whom we received every kind of civility and assistance ; particularly, in immediately sparing from themselves cloathing for us, &c.

We were likewise soon honoured with invitations from the neighbouring Gentlemen, &c. particularly from the Viscount Desandrouin, to visit him, and take some refreshment ; after which, we were by them politely furnished with carriages, &c. to convey us to Calais, where, notwithstanding it was past midnight, and the gates had long been shut, the Guards had received orders to open them to us : Accordingly we were admitted, and even found the Commandant sitting up to receive us, which he did with great cordiality.

After this, we were most affectionately welcomed and entertained by Monsieur Mouron and family, of Calais ; and the next morning honoured with particular marks of attention by the Mayor and Civil Officers of the City, as well as by each of the Military Corps stationed there ; and in the afternoon we were, by public invitation, entertained at the City-Hall, &c.

We experienced similar marks of attention and approbation through such parts of France as we passed ; but were more particularly honoured with them at Paris ;---which circumstances I have here mentioned, as a tribute of grateful acknowledgment, justly due to the civilities I received in France.

As my chief object in this last Aerial Voyage was, the novelty and enterprize of being one of the first who passed across the sea from England



(50)

into France, by the rout of the Air, I did not encumber myself with any other philosophical instruments than the Barometer of my former Voyage, and a Mariner's Compas, which last was, as in our former experiment, rendered in a great measure useless, by the frequent rotary motion of the Balloon and Car; which circumstance, however, was in some degree compensated by the alternate magnificent and extensive views that it afforded us of England and France, without the trouble of changing our position, or looking in any other direction than straight before us.

The Balloon, at the time of our ascent from the Cliff, was very near completely filled with *gaz*, but from frequent use, and injury incurred by friction in transportation, &c. was rendered permeable to it in many parts.

I observed in this, as in our former experiment, the alternate distension and collapsing of the lower pole of the Balloon, according as we ascended or descended. And I could not but again notice our *apparent quiescent state*, and insensibility of motion or progress, which I could not be sensible of, or perceive, by any other circumstance, than that of our going from, or approaching towards objects ; which changes, at the time, seemed to me to be produced by the *very reverse* of what really occasioned them; it all the time appearing to me, as if we were in a fixed or quiescent state, and that the various objects which we saw changing their situations and appearances, were alternately passing to or from us, or revolving around us.

From the circumstances of this last Aerial Voyage, I am led to think, that the natural course of a Balloon, left to itself, from the time of its ascension to its descent, would always describe a single arch, with but very little horizontal progress ; which, to any considerable extent, can only be obtained by a constant, and very nice attention to keep up the equilibrium between

between the suspending power of the Balloon, and the weight suspended, by very frequently casting out Ballast, a little at a time.

Our last Aerial Voyage appears to me to have formed four unequal arches.

The first, from the Cliffs of Dover to about one-third of the distance across the British Channel, which formed an arch, the diameter of which was about seven, or seven miles and an half.

The second, from that distance to about midway across the Channel, which formed a smaller arch, the diameter of which, I judge, was about four or five miles.

The third, was from about midway of the distance across the Channel, to three quarters over, which formed another arch, larger than the last.

And the fourth, or last arch, was from about three quarters of the distance over the Channel, to the Forest of Guines, in the province of Artois, in France ; which being (besides the several directions which we traversed) between eight and nine miles distant from the land that we first passed over, formed by much the largest arch ; the diameter of which I apprehend to be between fourteen and fifteen miles.

I could not but observe how much less governable the Balloon seemed to be than in our former experiment, repeating the quantity of ballast necessary to be cast out, to check its descent, or to cause it to ascend. Whether from the less perfect state of the Balloon, or from a different state of the atmosphere from that in which we made our former experiment ; or whether from the power of attraction over the water ; or whether from more moisture in the air, in that situation, by being ab-

forbed, accumulating and lodging about the net, and on the Balloon, &c. or whether we had, from inattention, suffered ourselves to descend much before we noticed it, and thereby acquired such a degree of velocity of descent, as required a certain proportion of ballast to be cast out, to counteract that circumstance alone, in addition to what might have been necessary to produce our ascension from a quiescent state, or horizontal progress only.

Whether to one alone, or partly to each of these causes, it is to be attributed, I must submit to my superiors in philosophical knowledge : But of the fact I am convinced, as we were never able to accomplish our wishes in that respect, at a less expence of ballast than fifteen pounds weight.

Although I recollect, in our former Aerial Voyage, to have noticed it at the time, yet as I had omitted it in my memorandum made during our progress, I cannot but mention here, that amidst all the magnificent and extensive scenes under and around me, nothing at the time more impressed me with its novelty, than (if I may be allowed to use the expression) the awful *stillness or silence* with which we seemed to be enveloped ; which produced a sensation that I am not able to describe ; but which seemed at the time to be a certain *kind of stillness* (if I may so express it) *that could be felt.*

Unaccustomed to write for the public eye, and but little acquainted with philosophical subjects, I most humbly hope, the Reader will excuse the plainness of the style and the awkwardness of the arrangement; and would farther crave indulgence, for having presumed (with the little knowledge I have in such researches) to hint at any opinions or remarks of my own.

I will

I will not again presume to assert more, than that all the circumstances related in this Narrative, are literally and exactly as they occurred; and are transcribed from minutes taken at the precise periods alluded to.

If notwithstanding all these Imperfections, it should be judged in any degree worthy of the indulgence, or attention of his countrymen, the Author will ever esteem it the first honour of his life; and hopes to find, in *their approbation*, full compensation for *those honours and rewards the French Court have partially bestowed on their Countryman*, the companion of these Voyages; who, independent of those which were conferred on him at Calais, likewise met with distinguished ones at Versailles, from *the King, the Royal Family, the Minister*, and other great Officers of State; and received, by Royal Order, a present of 12,000 livres, with a pension annexed of 1,200 livres a year; and as a perpetual memorial of this event, the place where we descended, to be called in future the Canton of Blan-chard.

On which occasion, I cannot but express my acknowledgments of the honour done me at Paris, in enrolling my name as a founder and perpetual Member of their new Museum; and of the liberal sentiments shewn me on this side of the water, by the Corporation of Dover, in admitting me as honorary citizen of that ancient and important place.

MARGARET-STREET,
CAVENDISH-SQUARE, }
April 1785.]

END OF THE SECOND VOYAGE.

PROCES Verbal de M. M. les Officiers municipaux, et principaux Habitans de Calais: dressé à l'occasion de l'arrivée du Balon de Monsieur Blanchard, venant de Douvres.

L'AN mil sept cent quatre-vingt-cinq, et le septième jour de Janvier, à une heure et demie de relevée, le vent étant au Nord-Ouest, sur les avis qui nous ont été donnés par les guéteurs de cette ville, en execution des ordres qu'ils avoient recus de nous, qu'il paroiffoit à l'horison du côté de Douvres, un corps de figure noirâtre, s'elevant dans les airs, et dont la direction étoit vers cette côté : Nous Officiers municipaux de la Ville et Gouvernement de Calais, nous nous sommes transportés en un endroit convenable, pour observer si ce n'étoit pas le Balon Aérostatique de Monsieur Blanchard, qui étoit attendu de moment en moment d'Angleterre, où il n'étoit retenu que par la contraiété des vents ; et peu après nous avons reconnu que ce ne pouvoit être que ce Balon, dont la course paroiffoit étre vers le Blanet, objet le plus élevé, le plus apparent, et le plus distinctif de la côte de France, et qui devoit naturellement servir de guide à un Voyageur aussi éclairé et aussi prudent qu'est Monsieur Blanchard, dont la capacité est constatée par les différentes courses aériennes qu'il a faites, tant en France qu'en Angleterre, et qui lui ont concilié, à juste titre, l'estime et la bienveillance des deux nations. Vers les deux heures, nous avons reconnu que ce Balon étoit vers le milieu du détroit, où il est resté stationnaire, à la hauteur d'environ quatre mille cinq cens pieds au dessus du niveau de la mer, autant que nous avons pu en juger à l'aide des instrumens, dont nous avons fait usage pendant quinze minutes ; après quoi, il a continua sa course vers la côte de France, tantôt en s'elevant d'avantage, tantôt en se baissant,

fant, même jusqu'au point de nous occaisionner des craintes, d'autant plus que le vent avoit varié de plusieurs points vers l'Ouest, ce qui pouvoit l'emporter dans la Mer du Nord, et ce qu'il n'a evité qu'en dirigeant son bateau le plus pres du vent; au moyen de quoi il s'est approché de nos côtes avec moins de danger, en s'éloignant cependant du terme de son Voyage, qui étoit cette ville; le vent s'étant encore au Sud, et jusqu'à Ouest, quart Sud-Ouest; nous avons été même à reconnoître les talens superieurs de Monsieur Blanchard, dans l'art aérostatique, par la direction de son Balon, qu'il a encore porté plus à l'Ouest; ce qui retardoit, à la vérité, son Voyage, mais le rendoit parfaitement sûr, & faisait cesser nos craintes.---Enfin, à trois heures précises, nous avons eu la satisfaction d'entendre le coup de canon du Fort Rouge, qui annoncoit que le Balon avoit franchi le passage de la mer, et se trouvoit dans l'alignement de la lesse d'icelle. Au même instant, nous avons vu que le Balon cherchoit à descendre et à prendre terre; mais que le vent le reportoit vers la mer, ce qui a obligé les Voyageurs à remonter et poursuivre leur course au-delà de nos marais, dans les quels ils ne pouvoient prendre terre sans danger pour des personnes qui ne les connoissent point, à cause des caux, dont ils sont couverts, et qui pouvoient être prises par des étrangers, pour une continuation de l'arrière port, ou un golfe formé par la mer; et à l'issue de ces marais, nous avons vu descendre le Balon, à trois heures et demie, aux environs de la pointe de la Forêt de Guines; et ne pouvant plus juger du terme où les Voyageurs avoient mis pied à terre, nous avons député vers eux, à l'effet de les engager à venir ici, ainsi qu'ils se l'étoient proposé, et d'y faire amener leur Balon; et nous étant rendus ensuite à l'Hotel-de-Ville, nous y avons rédigé ce procès-verbal, qui a été signé par nous, et par plusieurs des principaux habitans de cette ville, qui ont été témoins, avec nous, de nos observations: et

et il a été arrêté que des lettres de citoyen feront demain présentées à Monsieur Blanchard, dans une boite d'or, ornée d'un medallion analogue à son Voyage, et au succès d'un enterprise dont il ne peut resulter que des grand avantages.---Que les temoignages de l'estime que nous fesons de Monsieur John Jeffries, Docteur en Mèdecine, compagnon de Voyage de Monsieur Blanchard, et qui n'a point craint de s'exposer avec lui au passage de la mer, par l'espace des airs, lui seront également offerts, avec prière de vouloir bien les accepter, ainsi que les regrets de ce que nous ne pouvons faire plus envers un étranger de son mérite, sans une autorisation spéciale de la cour, dont acte.

Il a été arrêté que Nosseigneurs les Ministres feront tres-humblement supplies de permettre que le Balon qui a servir passage de la mer, executé par Messieurs Blanchard et Jeffries, ainsi que le Batteau dans le quel ils étoient placés, soient déposés en l'église paroissiale de Notre Dame de cette ville, comme un monument de ce Voyage memorable, et pour la transmettre à la postérité, par une inscription.

Signes, *De Bienassis, Marechal de Camp, et Lieutenant de Roi Commandant pour S. M. à Calais; Le Comte de Calonne-Courtebonne; D'Andieville, Commandant pour le Roi à la Citadelle; Demererven, Chef de Brigade au Corps-Royal d'Artillerie; Dupereau, Commissaire de la Marine; Bebague, Maire; Le Boulie, Vice Maire, Capitaine de Dragons; Delentun, Echevin, ancien Major de la Citadelle; Cordier de la Houssaye, Conseiller du Roi, Echevin; Audibert Bernard, Echevin; Cuccheval, Echevin; Fourneau, Aide-Major de la Place; Aubert le jeune, Controleur des Finances de la Ville; Mouron, père, ancien Tresorier des Troupes; Mouron, fils, Lieutenant des Gardes du Duc de Charost.*---Signé, *Pascal Lefevre, Conseiller du Roi, Secrétaire Greffier.*

*EXTRAIT du Registre aux Délibérations du Corps municipal de la Ville et
Comité de Guines, du 17 Février, 1785.*

CE jour, le Corps de Ville assemblé, présidé par M. le Fevre, Echevin, pour l'absence de M. Cuezelin, Lieutenant de Maire, et Syndic de la Nobleffe du Calaisis, M. de Launay, Procureur du Roi, a dit : " Les arts et les sciences ne peuvent que se perfectionner sous le règne heureux d'un Monarque qui en est le Protecteur : " la physique, negligée durant les siècles précédens, fait aujourd'hui des progrès qui nous étonnent ; la découverte de l'électricité au commencement de ce siècle ; celle des Montgolfières, faites depuis deux ans, nous font espérer la connaissance de plusieurs autres phénomènes que la nature nous a jusqu'au présent cachés.

" M. Blanchard vient de nous apprendre par son intrépide Voyage Aerien, qu' avec des talens et de la résolution, on peut exécuter les choses les plus extraordinaires, et que le génie François, encouragé par son Souverain, ne trouve rien d'impossible.
 " ---Vous n'ignorez pas, Messieurs, l'accueil favorable que le Roi a daigné faire à ce célèbre Aeronate, et le récompense qu'il vient de lui accorder.---S. M. ne s'est bornée à cette seule munificence ; elle a bien voulu permettre encore qu'il soit élevé au lieu de sa descente, un monument à sa gloire, et à celle de son généreux compagnon, le Docteur Jeffries : Notre délibération du 9 Janvier dernier, et notre requête du 18, ont été favorablement accueillies du Monarqué, qui trouve bon que nous fussions érigé dans la Foret, à l'endroit où le Balon de M. Blanchard s'est arrêté, une colonne avec une inscription telle que nous l'avons proposée.

" Quelle

“ Quelle doit être notre satisfaction, Messieurs, de pouvoir contribuer à éterniser la memoire des deux premiers hommes qui ont osé franchir dans les airs, l'espace qui s'épare l'Angleterre de notre Continent, et donner à ces deux courageux Voyageurs des marques publiques de l'estime qu'ils nous ont inspirée!--- Hatons-nous d'elever ce monument ; réglons dans cette assemblée la forme et les proportions de la colonne, et que l'un de nous soit chargé de veiller à son execution.”

Surquoi l'assemblée ayant delibére, il a été unanimement arrêté ce qui suit :

1. La Colonne sera en marbre du pays, d'ordre Toscan, et dans les dimensions marquees au plan joint à la présente délibération.
2. M. Forrin, Aesseisseur, voudra bien se charger de veiller à l'execution de cet ouvrage, qui sera commencé dans la courant du mois prochain.
3. La depense qu' occasionnera cette Colonne sera sous le bon plaisir de M. l'Intendant, prise sur le caisse des revenus patrimoniaux de cette ville, et payée par le Syndic-receveur sur des mandemens, dans la forme ordinaire, qui ne seront expédies que d'après les certificats du dit Sieur Fortin.

Ainsi soit, arrêté, et delibéré en la dite assemblée, le jour, mois et an susdits, et ont signé ainsi.

(Signé)

FORTIN, DELAUNAY, et LE FEVRE.

Pour copie conforme au Registre
LA FITTE.

Inscription on the Front of the Column.

REGNANTE LUDOVICO XVI.

ANNO M.D.CC.LXXXV.

JOANNES PETRUS BLANCHARD, Gallus,
Comites JOANNES JEFFRIES, Britannus.

Die VII. Mensis Januarii,
 Hora Ia. Post meridianâ
 Ex Arce Dubriensi
 Machina Aerostatica
 In Sublime Evectus,
 Fretum Britanniam inter et Galliam
 Primus superavit,
 Et post Horas II. S. Aerii cursus
 Hoc in loco confedit.
 Audaciam mirati Novam
 Cives Guisnenses hocce Monumentum
 Posuerunt.

On the reversed Sides of the Column are engraved, on the one, the Arms of Guines; and on the other, those of the Viscount Desandrouin.

On the opposite Side of the Column.

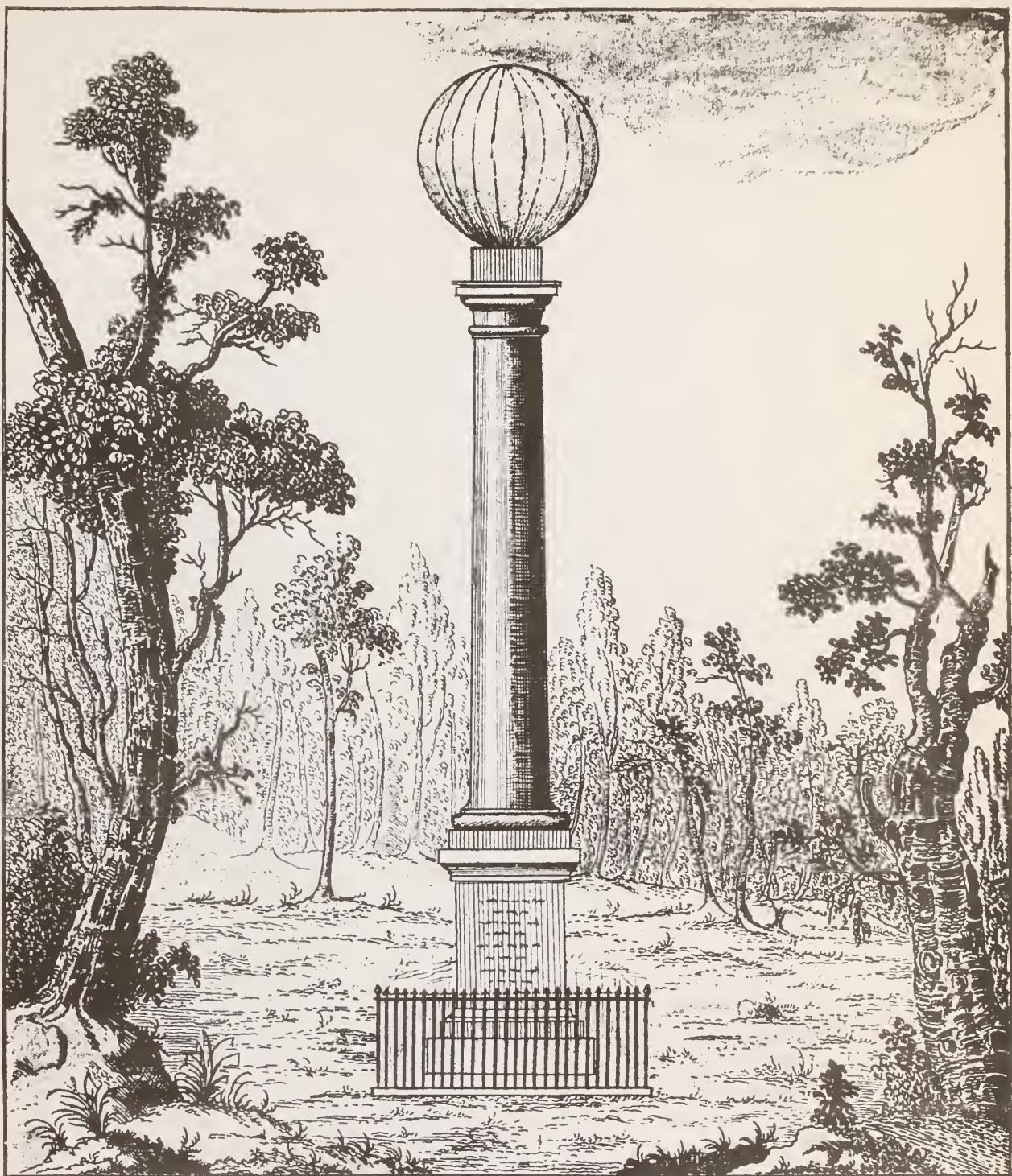
SOUS LE REGNE DE LOUIS XVI.

M.D.CC.LXXXV.

JEAN PIERRE BLANCHARD, des Andelis, en Normandie,
 Accompagné de JEAN JEFFRIES, Anglois,
 Partit du Chateau de Douvres,
 Dans un Aérostat,
 Le VII. Janvier, à une Heure et un quart,
 Traversa le premier les Airs,
 Au-dessus du Pas de Calais,
 Et descendit à Trois Heures Trois Quarts
 Dans le Lieu même où les Habitans de Guisnes
 Ont élevé cette Colonne
 A la Gloire des deux Voyageurs.

(Signé)

De Guizelin, Lt. de Maire.
 Fortin, Berger, De Launay, Le Fevre,
 Echevins et Officiers Municipaux.



The Column erected by public Authority to commemorate the Event,
and placed in the Forest of Guines, on the Spot where Dr. Jeffries and
M. Blanchard alighted after their aerial Voyage from England into
France, the 7th of January 1785.

FIRST AERIAL VOYAGE ACROSS THE ENGLISH CHANNEL

DIARY OF DR. JOHN JEFFRIES, THE AERONAUT

It has been very generally supposed that the aeronaut who first crossed the British Channel was an Englishman. He was of English ancestry, but an American by birth. His great-grandfather, David Jeffries, removed from England to Boston in 1677, and married the daughter of Governor Usher. David Jeffries the aeronaut's father was treasurer of the town of Boston for twenty-eight years prior to the Revolution. Dr. John Jeffries was born 1744, was graduated with first honors from Harvard University in 1763, and read medicine with the distinguished Dr. James Lloyd of Boston. He commenced practice in 1766, was successful, but desiring further opportunities, went to England in 1768 to study under the most celebrated physicians and surgeons of London. He received the medical degree from the University of Aberdeen in 1769, and returned to Boston, where he again met with great success in his practice. His English visit and intimacy with the British officers in Boston made him a loyalist by association, though his father was a stanch patriot, deacon of the old South Church. He viewed with the commanding officers from Copp's Hill the battle of Bunker Hill, and crossed over and identified to Genl. Howe the body of Dr. Warren. They had been Freemasons together in St. Andrew's Lodge. He naturally retired to Halifax with the troops when they evacuated Boston. Through his warm friend, Genl. Eyre Massey, commander-in-chief of the Province, he was employed as surgeon in the military hospitals, and went to England in 1779, and there passed the examination at Surgeons' Hall, and was commissioned Surgeon Major. He was with the troops before Savannah and Charleston. He had left his wife and two children under the care of his friend, Benj. Thompson, Count Rumford. News of her sudden death induced him to give up his commission and go back to England, when he declined Lord McCartney's offer of a position on the medical staff about to go to India. During the next ten years, till his return in 1789 to his native Boston, he was a very successful practitioner in London; and becoming scientifically interested in aerostation he made two aerial voyages, in which experiments he was aided by Sir Joseph Banks the President and Dr. Blagden the Secretary of the Royal Society. His accounts of these voyages read before the Society were highly commended as contributions to science. They were printed and published in

London in 1786. Dr. Jeffries said: "I wished to see the following points more clearly determined; first, the power of ascending or descending at pleasure while suspended and floating in the air; second, the effect which oars or wings might be made to produce towards the purpose, and in directing the course of the balloon; third, the state and temperature of the atmosphere at different heights from the earth; fourth, by observing the



JOHN JEFFRIES, M.D. 1768.

varying course of the currents of air or winds at certain elevations, to throw some new light on the theory of winds in general."

Nothing scientific had yet been done by any of the balloonists. Among them was the Frenchman, Blanchard, who had made three ascents in France and one partially successful in England with Dr. Sheldon, F.R.S. Dr. Jeffries paid Blanchard one hundred guineas for a seat in his fifth ascent, which was from the Rhedarium in London, November 30th,

1784, witnessed and patronized by the Prince of Wales and Duchess of Devonshire. They landed safely in the county of Kent. He next determined to carry out his scientific investigations by crossing the channel, the possibility, etc., of which was then doubted. Balloon ascents were very expensive when there were no railroads, telegraphs or gasometers. Dr. Jeffries, however, agreed to pay all expenses, etc., for a voyage across the channel, amounting to over £700. Even with his bills paid Blanchard endeavored by various means to avoid fulfilling his contract. A vest lined with lead the tailor unfortunately brought to Dr. Jeffries at the hotel at Dover. This ascent was finally arranged from the cliff near the castle. From Dr. Jeffries' personal diary, March 1777 to 1819, still extant, the following notes are extracted:

Jan. 7, 1785. This morning, at six o'clock, my *little* hero Blanchard entered my bed chamber, and told me he believed the wind and weather were fair, and would do for our intended aerial voyage from the cliff below the royal castle of Dover, for the continent of France. Between eight and nine o'clock went with Mr. Hugget, the pilot, to the pier and pilots' lookout. The pilots were of opinion that the wind was not decided, and did not extend beyond mid channel, and that the wind was equally from the French land as from the English coast. This opinion embarrassed me much, although I did not think as they did. While I was at the lookout, the signal gun for our intended voyage was fired, and the flag hoisted, and soon after several other guns, to give notice to the adjacent towns, etc. The balloon and net, etc. were carried down to our apparatus, the balloon hung up, and we began the process for filling it. At nine o'clock went to the castle and breakfasted with the Deputy Governor Lane, after which retired to Capt. Arch. Campbell's apartments to dress for my voyage; after, called to pay my respects to Capt. James Campbell and his lady, and then went down to our apparatus, where I found my little heroick Captain, and the balloon half filled. At half after eleven o'clock let off a small Mongolfier, which went very well, and took a very good direction for us. At twelve o'clock filled and sent off from the hands of Governor Lane our little Devonshire balloon, (which had been the herald of our aerial voyage from London into Kent) and it took the same course as the Mongolfier had done. At half after twelve, we carried our aerial car and placed it under the balloon, and began attaching the cords of the net to it. At one o'clock had completed it, fastened and adjusted in its place the barometer. We then took in our bladders, other things, and eighty pounds of ballast, in bags of ten pounds each, compass, chart, loosened the ropes

which had guarded our apparatus, and let the balloon rise a little, and carry us free of the apparatus, &c.; then fixed our wings, etc., and balancing the balloon, found our weight too great, on which we cast out one sack of ballast; still too heavy, and on the very brink of the cliff cast out a second, then a third and fourth, and arose so as to clear the cliff, but being rather inclined to descend, we gradually emptied the fifth sack, and then arose gradually and most majestically. Exactly at quarter past one



JOHN JEFFRIES, M.D., IN THE BALLOON. 1785.

o'clock, we quitted the cliff, and had with us as follows,—three sacks of ballast of ten pounds each, balloon 148 pounds, net 57 pounds, aerial car and apparatus 72 pounds, Blanchard's books 34 pounds, Blanchard and his clothes 146 pounds, myself 128 pounds, sundries 19 pounds. In a few minutes after our departure, we saluted with our hands and flags, which they returned with very loud and repeated shouts and acclamations. Just before entering our car Monsieur B had most politely presented me with my colour, a British flag, in presence of the company and spectators,

on which I requested of Gov. Lane and Capt. Campbell, the commanding officer, leave for Mr. B. to display his French flag on our departure, which they very politely granted. At half past one, we had risen considerably, but appeared to have made very little progress, and that little rather to the eastward, the wind at our departure being less than at any part of the morning, and more westerly; the weather very fine indeed, very clear sun, temperate and warm; the barometer at starting, 29.7, has now fallen to 27.3.

We had a most enchanting view of the country back of Dover, &c. for an extent of an hundred miles around, counting 37 towns and villages, and a formidable view of the breakers on Goodwin sands, to which we seemed to approach. The coast of France likewise became very distinct. We passed over many vessels of various kinds, which we saluted as we passed, and they returned with shouts and cheers. The balloon extremely distended, and both tubes extended through their whole length and diameter. There seemed to be scarce a breath of air on the water under us. Three quarters past one, cast both tubes over the sides of the car, and began to attach the bladders to the hoops of the car. In doing this, I unfortunately, in reaching behind me, pushed off my colour, which Mr. Blanchard had placed there for security. 50 minutes after one, found we were descending fast; emptied one bag of ballast; not rising, emptied half another, and began to rise again. Appeared to be about one third of the way from Dover, losing distinct sight of the castle. At two o'clock, attached the slings to the circle, one at each end, and the third in the middle for our feet, to retreat to, like beavers, in case we were forced down into the water. Found that we were descending again fast. Cast out all the remaining ballast and bags and all; did not rise. Cast out a parcel of Mr. B.'s books, and in a minute or two found ourselves rising again, and that we were full midway between the English and French coasts. 30 minutes after two, found we were descending again; obliged to cast out by parcels all our remaining books, and scarcely found ourselves to arise after it. We had now nothing left but our wings and apparatus, &c. 40 minutes after two, (having passed over a number of vessels, and being about three quarters of the way over from Dover to the French coast, having a most alluring and enchanting view of it from Blackness, Cape Blanc Nez, quite to Calais and on to Gravelines) found ourselves descending, and very rapidly,—the part of the balloon next to us having collapsed very much, apparently for many feet from the lower pole. We cast out all the little things we could find,—apples, biscuits, &c., then one wing; still descending, we cast away the other wing; but not rising, cut away the damask curtains around the car,

with the gold cord tassels, &c., then stripped off all the silk lining, threw out our bottle of *l'eau de vie*. In its descent it cast out a stream like smoke, with a rushing noise, and when it struck the water, we heard and felt the shock very perceptibly in our car and balloon. I then attempted and succeeded in unscrewing and getting out the moulinet and handle, and cast all over. Found ourselves still descending, and now approaching the sea, within 120 yards, we proposed and began to strip, Mr. B. first casting away his surtout and coat. I then cast away my coat; then Mr. B. his new coat and long trousers; and we got on and adjusted our cork jackets, and were preparing to get into our slings, when I found the mercury in the barometer falling, and looking around found that we arose, and that the pleasant view of France was opening to us every moment, as we arose to overlook the high grounds. We were now about four miles from the shore, and approaching it fast. 50 minutes after two o'clock, had a fine view of Calais and between twenty and thirty little towns and villages. We now rose very fast, and to a much greater height than at any time since our first ascent. Exactly at three o'clock, thanks to a kind Providence, we passed over the high grounds from the shore, about midway from Cape Blanc Nez and Calais. At our entrée we were very high, and passed over in a magnificent arch. Barometer had fallen to 23 and three-tenths. Nothing can equal the beautiful appearance of the villages, fields, roads, &c. under us, after having been so long over the water. Mr. Blanchard threw out several packets, each of which was exactly five minutes in reaching the surface of the earth. The weather continued very fine; sun very bright all our voyage; the wind a little increased, and being more westerly than when we first passed from the sea, we were approaching fast the grounds covered with water, on our left, and above and a little to the right of Calais. In a few minutes we changed our course again to the southwest; and found ourselves gradually descending. Having before cast away both our anchors, cords, &c., Mr. B. took the cords of our slings, and the wood of them, to serve as an anchor in our descent. We took off our cork jackets to favour our descent, and I proposed to Mr. Blanchard that we should each of us take a bladder and pass as much as we could, and reserve the throwing it away at the very instant of descent, to break the force of the shock. We now approached a forest, and continuing our course directly over its length, and descending more rapidly, we cast away the substitute anchor and cord we had prepared. We were going much faster than any preceding part of our voyage, sailing along obliquely downwards, directly into the forest. We cast out our newly invented ballast, one bladder after the other, then my cork jacket, after it Mr. Blanchard's, and descended (after having passed

four-fifths of the forest) so that I caught hold of the top of a tree, exactly at quarter past three o'clock, and stopped our progress. The weight being relieved by pressing on the tree, the balloon floated and played very beautifully over us, at times pulling me very strongly, as though determined not to submit; but in 28 minutes, having opened the valve, the inflammable air escaped, with a very loud rushing noise. We found the balloon disposed to let us down, and pushing our car off from the branches, we descended most tranquilly between some trees, which were just open enough to admit the car and balloon. We immediately set ourselves about emptying the balloon and detaching it from the car, at which we worked hard, quite by our selves for about half an hour, before any person got up to us; after which a number of peasants came up, and some horsemen, and assisted us in emptying the balloon, and after it, in folding it up; and placing it in the car, took it up, and proceeded in triumph with it on their shoulders.

Dr. Jeffries's regular daily diary says, in continuation, as follows:

1785. Jan. 7th. At three quarters past three o'clock, landed in France (about 12 miles from the sea) in the wood of Guines, from the aerial car of our balloon, with my little Blanchard. At 7 o'clock arrived on horseback at the chateau of Le Vicomte Desandrouin. We were most politely welcomed and entertained. At nine set off from thence in post chaise and six horses, and by pressing invitation stopped at the chateau of Le Vicomte Desandrouin, à Hardinghard, and were saluted at our entrance into the hall by a young lady singing some stanzas in honor of our enterprise. At eleven o'clock set out from thence, and at one o'clock arrived at the gates of Calais, at which we were admitted by the Commandant's order, he having sat up for us. After passing four strong gates, with drawbridges, &c., at half past one o'clock we alighted at Mr. Mouron's in Calais, and immediately went to pay our respects to the General Commandant, whom we found sitting up for us. His lady, in bed in a pavilion tent in his room, received us most courteously. Returned to Mr. Mouron's, got some tea from his lovely family, and retired to rest. May I never be unmindful of the mercies of this day, but thank God all my life.

Jan. 8th. This morning, the Governor, Commandant, Mayor of the City, Chief Justice, Chief Engineer, and all the different corps of officers, came to welcome us, &c., prepared a most elegant dinner for us, at the City of London Hotel, where we dined with all the officers, magistrates, Mayor and Aldermen of the city, King's Procureur General, and all titled and principal people of the place and neighborhood. They presented Mr. Blanchard with the freedom of the city in a gold box, and made repeated apologies,

expressing their wish to do the same for me, but could not without leave from the Court.

Jan. 11th. At two o'clock arrived at Paris. After setting down M. Pilatre de Rosier, we passed on to M. L' Abbe de Viernay, Grande Rue Turrane, Fauxbourg St. Germain, where Mr. B. was received by his foster father, the Abbe, in the most affectionate and polite manner, with repeated embraces, &c. Dined with a number of gentlemen and ladies, and were greatly complimented. While at dinner a number of French dames entered our apartment, bringing with them a laurel crown, ornamented with ribbons, and embraced us again and again, and chanted some verses honorary to our aerial voyage. Mr. B. insisted on my taking an apartment with him at the Abbe's, which for the present I have consented to do. At Paris *incontestibly*.

Jan. 12th. At ten o'clock we set out for Versailles, to pay our respects to the King, &c. On our way called on Mons. Gireredot de Marigny, banker. Very politely received and complimented by him, and engaged to dine with him and share some of his best claret, as he says, the best in the world. At Versailles, paid our respects first to Monseigneur Le Compte de Vergennes; politely received and complimented by him, but like a minister, a courtier. From thence waited on Madame La Duchesse de Polignac; most kindly and politely received by her, though she was dressing at her toilet, like a Venus in white muslin, and surrounded by five ladies, all in white, who were attiring her, a most engaging lovely, affable woman. From her apartments we went to visit his Grace the Duc de Polignac and were by him received most kindly indeed. He was pleased to take great, very great notice of me, and spoke again and again of what I had attempted and done. Thence visited the royal palace and gardens at Versailles, the first palace I have ever yet seen, magnificent beyond my expectations, the statues in the gardens and the spouting deities and sea gods and in the basins most magnificent. I had not conceived anything like what I find it. Thence went to visit Mr. B's uncle, Charge en Chef de Menagerie du Roi; most affectionately received by him and family. Too late to-day to see the King; and met in the gardens Monsieur the King's eldest brother; had been walking in the gardens, eight or ten guards and a gent with him. This evening went to the *Comédie Française* at Versailles; saw *La Rencontre Imprévue*, followed by *La Triple Mariage*; both very well played, and exceeding ours by having *all the parts well played*. After the comedy, went to the Hotel de Comedie, and soon after received a polite invitation to sup with Madame Montensier, *Directrice et Propriétaire de l'opéra de Versailles*, with three lovely girls, and one most lovely in person and easy



JOHN JEFFRIES, M.D. 1815.

manners, and a number of gents, several of those I had seen perform in the comedy.

Jan. 13th. At noon attended the Royal Chapel, saw the lady of the Compte D'Artois and Monsieur at mass, and many of the nobility, great number of the Royal Guards attended; very great civility from the royal attendants in the palace, and particularly from the officers of the guards and officers of state. Had the honor to be conducted through the apartments, and to see the King as he was going to walk. Mons. B. mentioned me to him, as I stood by him, and he condescended to look at me, soon after which Monsieur came near and most condescendingly came towards me, and with a most kind and affable manner, after inquiring of his attendants if I spoke French, he made his compliments and said, "I am very glad to see you, Sir." He was dressed in black velvet and the Cordon Bleu,

Star, &c. The King was dressed very plain, with brown leather spatter-dashes. After this I received the compliments of all the nobility; officers of the guards, officers of the apartments conducted me from the gardens to their apartments, which were most grand, and paid me repeated compliments and civilities, and particularly the Chevalier de Bagneux, Captain in service de Gardes du Roy. Dined with Mr. Blanchard's uncle, cousins, &c., near the Cathedral Versailles; most hospitably and politely received and sumptuously entertained. Returned to Paris at 12.

Jan. 14th. This morning introduced by M. Hirschberg to the gents, wits, and men of learning at the Café Careau au Palais Royal. Most kindly and honorably received by them, and our pictures to be placed among the busts of the greatest men of wit and enterprise which already ornament that place. Thence went to the museum, visited M. Pilatre de Rosier. This morning received very polite letter from Mr. Franklin, Mr. Williams, and at our entrance into the lecture room of the museum we were received by repeated shouts of applause and clapping of hands, *encore et encore*; after which was placed at the side of the President, and heard the lecture, then congratulated by a great number of the first characters, ladies and gents, —La Duchesse, Le Duc, Le Vicomte, &c.; then introduced to Monseigneur Le Duc de Chatres, who received me most graciously indeed. Had long conversation with him, in which he complimented me greatly, and at the end of our talk he did me the honor to say he approved highly of my conduct, that he was very glad to see me here, and that he should be very glad to be acquainted with me. As soon as the claps of applause were ended, I received from the hands of the President of the Museum, accompanied with a very polite letter, a *billet d'entrée* as a Member and *Fondateur* of the French Museum. After dining with a large company of ladies, noblemen, Abbés, physicians, &c., went to pay my respects to his Grace the Duke of Dorset, English Ambassador; thence to Dr. Franklin at Passy; very hospitably and kindly received.

Jan. 15. Dinner with Dr. Franklin at Passy and number of ladies and gents. Supper with Madame Hirschberg, L'Hotel de Calais. Evening at *Opéra, Comédie Française*, &c.; elegant and brilliant company, and very elegant house.

Jan. 16. This morning introduced by M. De Hirschberg to M. Le Compte d'Ossun, at his hotel; very politely received and complimented by him, expressed his wish to accompany me to England. Went with Mr. Blanchard to Versailles at Court; presented to the Queen; heard the Duke de Polignac repeatedly speaking to the queen of me, and as often caught

her lovely eyes on me, and the King's while at dinner. Received the compliments of the Duchess and Duke of Polignac. Introduced to the Compte d'Artois at his apartments; very politely received and complimented, with his approbation; received the compliments of Madame and the ladies of the Court. Introduced to M. Le Baron de Breteuil, le Ministre de France; very politely received by him indeed; complimented me again and again, said he was charmed with me, very glad to see me. Dined with him most magnificently. Introduced to and complimented by fifty Lords and officers of the Court, and ladies, the Bishop, Abbé, and the Cardinal Rohan. Received very particular compliments and marks of approbation from Le Compte Suffren, the gallant French Admiral, who said he envied my courage, and wished he had half as much. Introduced to Madame Breteuil, daughter of the Minister; very graciously received by her, and continually complimented by her for my courage, goodness and politeness. Introduced by her, particularly, to every lady at her levee at the Minister's. Evening, returned to the drawing room; saw two ladies presented; one the Princess Lamballe, most lovely, and the most brilliant and rich dress I had ever seen. Introduced to the grand Écurier, and very graciously received and complimented by Count Dillon. Then very particularly complimented by the Marquis de Laroche du Maine, who brought me from Versailles to Paris with him in his chariot, and introduced me to his family at his hotel, and loaded me with compliments and words of approbation. Paid my respects to M. L'Abbé de Viernay, and found there a card from his Grace, the Duke of Dorset, to dine on Tuesday next. Evening at the grand ball, the *Société, rue Coqueron, Hotel D'Orléans*, where I was received by universal and continuous shouts and claps of applause, embraced and complimented by hundreds of the first ladies and gents in Paris. Presented with a garland crown by the prettiest mademoiselle of Paris, placed on my temples by the hands of a lovely fair one, Madame Baunoir; very kind attention from Capt. Crofton, of the 69th, who introduced me to his brother, the Count, and his lady, and a most elegant group. The most particular favours and marks of attention through the whole evening from the lovely little vivacious Madame de Talairac, *rue de Maile*, who with lovely freedom and *simplicité de cœur* told me she was eighteen, had married at fifteen, had an infant, &c., &c.; took affectionate leave of me and engaged me to come and see her. I cannot describe the attentions shown me, marks of approbation and compliments paid me.

Jan. 17. Dined at M. Le Compte de Carrau, *rue de l'Université*, elegant house, apartments, &c.; very politely received and entertained by him, many compliments from him and company, Barons, Noblemen, &c. Thence

accompanied Mr. B. to Monseigneur Le Duc de Charast, Governor de Calais; very politely received by him and daughter.

Jan. 16. This morning sat for my portrait to Mr. Pujos, *peintre, rue Pelleter*. Dined with the Ambassador, his Grace the Duke of Dorset; met there Lord Trentham, who was at Dover when we ascended in the balloon, Col. Tarleton, and a great number of English noblemen; received many compliments from them. Evening, went to the opera, where we were honoured with loud claps and shouts of applause, *three* times repeated, before the curtain drew up, and repeated again when the opera was over. The house and scenery very elegant, with exquisite dancing by Madame Deimar and Mons'r Vestris; the dresses of the dancers, &c., uncommonly neat and elegant; performers very numerous. Band of musick very large and good, great number and elegant company. This day dined at the Duke of Dorset's elegant chateau; a number of most elegant ladies, in person, dress, and manners.

Jan. 19. Dined at Madame Limon and Madame St. Germain, rue St. Honoré. Most politely and affectionately received and hospitably entertained by them and the company. Received an order of admittance for the *Comédie Française* this evening. Received there by universal and *repeated* claps of applause and approbation. Saw the comedy of *Figaro* (by Mr. Beaumarchais); most witty, poignant composition, and supported to the life. Mr. Molé a capital performer; the house, scenery, girandolles and dresses superior to either of ours in London; plays in all their parts *far* better filled up than with us. The women charming; they act with so much ease and grace, and never beyond nature. Met at the comédie Mr. Franklin, and received his compliments.

Jan. 20. Visited, with Mr. B., Madame Baunoir, rue du Faubourg St. Martin, No. 23. Most kindly received; a lovely woman. Dined with Madame la Comtesse de Coualir, à l'Hotel à Place de Louis Quinze, a princely hotel, &c.; most elegantly and affectionately received; a truly elegant woman, and Countess indeed. I am charmed with such company, and well I may be. This day took lodgings at the Hotel de Vauban, rue Richelieu, at four Louis d'or a month. This evening at the Paris Assembly ball, Musée, rue Dauphin. Received again with claps of applause, &c.; particularly attended to by Capt. Crofton and number of English gents. Met there the charming Madame Baunoir and Madame de Talairac, most engaging and lovely; prayed me again and again to visit them. Met again there Le Compte de Crofton and the comptesse, with whose party I supped; paid very great attention to me, brought me home (I having lent my carriage to the charming Madame Baunoir), and urged me to accept of

apartments with them, &c. At the ball Mademoiselle Prieur and her father introduced themselves, and were particularly attentive to me.

Jan. 21. Dined at the Marquis de Brancas; very graciously received by him and the Marchioness. Introduced to M. Le Comte de Sceaux, who told me he supped with the Queen a few nights since at Versailles, and sitting near the Queen heard her tell the Duke of Dorset that she had seen and noticed me at Versailles, and wished to have understood English to have talked with me. Several other noblemen at the Marquis de Brancas; a sumptuous hotel, &c.; all repeatedly polite and complimentary to me. Visited and drank tea with Mademoiselle and M. Prieur, rue Colombe. Supped at M. Le Comte de Crofton, rue Traversière; large party of ladies of fashion, foreign noblemen, &c. Madame la Comtesse very attentive to me, as she always is.

Jan. 22. Went out to Passy, a most delightful situation. Walked in Palais Royal, and round the Tuilleries; delightful places. Dined with Le Docteur and Mons'r Franklin at Passy. Met there Mr. Jona. Williams, Dr. Bancroft, and the celebrated and brave Commodore Paul Jones, from whom I received many compliments on my enterprise, and returned them, he deserving them much more than me. Evening, returned to Hotel Vauban. Received a card from Monseigneur Le Duc de Charost, to dine on Thursday next. This evening supped, &c., at the Comtesse de Belinworth, the Comte de Crofton, Lady, and with lovely, lovely women.

Jan. 23. Waited on his Grace the Duke of Dorset. Called on Madame Talairac, rue de Maile. Thence visited Madame Beaunoir, rue Faubourg St. Martin; kindly received; and took them in my carriage, and carried them to dine with me at Madame Talairac's; charming domestic circle. Thence we went to the Italian Comedy, where I was unfortunately ill, fainted, &c., taken out in the arms of a gent., the lovely fair ones attending. After the comedy, Madame Beaunoir led me again to my box, where I was highly entertained by seeing the comedy of Fanfan and Colas, *Ou les frères de lait* (written by Madame Beaunoir) very well played. After the play I took the two ladies to the ball, rue Coqueron, where after attending them half an hour, I left them and returned to my hotel, finding myself indisposed.

Jan. 24. Dined at M. Le Comte de Crofton. Evening at the *Comédie de Variétés au Palais Royal*. Supped at Madame Comtesse de Crofton. Met there Madame le Comtesse de Belvedere and Madame la Vicomtesse de Liniere; very polite to me; invited by the latter to supper to-morrow evening.

Jan. 25. Dined with M. Gireredot de Marigny, l'Hotel Colbert, rue

Vivienne. Large company of barons, noblesse and gentry; most sumptuous entertainment; house like a palace in furniture, sculpture, paintings, &c. In evening M. Gireredot carried me to the opera, and honored me with a front seat in his box. A new opera of Pannege; most crowded house, and the most numerous, brilliant company I ever saw. The scenes, dresses, and decorations superb; dancing not to be exceeded, I think.

Jan. 26. Dined at M. Le Marquis de Laroche du Maine; most elegantly entertained. Monseigneur Le Duc de Montmorenci dined there; complimented by him and several other nobles, barons, &c. Mademoiselle La-roche du Maine a sweet, elegant little girl; band of musick and singing during dinner. Many compliments from the Marquis. Evening at the Italian comedy; went very late. Between the first and second comedy, it became known that we were there; our names were echoed from the pit, and universal and repeated claps of applause succeeded, to which we endeavored to return our compliments.

Jan. 27. Took into my service Mons. Bruilli, procured for me and recommended by the Compte de Crofton; to give him forty sous per day, he to dress my hair, &c. Dined with Monseigneur Le Duc de Charost, rue de Bourbon, Fauxbourg St. Germain; an elegant chateau. Very politely received by M. and Madame. Met there at dinner a number of noblemen, abbés, &c. The Duc Charost carried me to a museum, where he introduced me to a large number of noblemen, ladies, abbés, &c.

Jan. 28. Accompanied Capt. Crofton to the Fauxbourg St. Germain, to the Convent de Parthemont, rue de Grenelle, to see his sister there, a fine, charming, blooming girl (lost to the world). Saw there a lovely girl from Virginia. Dined at Madame Beaunoir; met there Madame Tailairac and number of ladies and gents. Evening, supped at Madame La Comtesse de Crofton; as usual very kind to me. Met there La Comtesse de Liniere (who invited me again to sup on Sunday evening), and the Marchionesse de Fleury, who chatted and looked pleasant things.

Jan. 29. Supped tête-à-tête M. Le Comte de Crofton. Madame la Comtesse, *au lit la même appartement, bien plaisir*.

Jan. 30. Went to *petit souper* at Madame La Vicomtesse de Liniere, rue Notre Dame des Victoires; a most lovely creature, and very affable, with looks that may be felt. Met an elegant company there.

Jan. 31. Sat for my profile to M. Chaportay. Walked out to Passy, and dined very pleasantly with Messrs. Franklin and Williams. Very kindly received.

Feb. 1. Dined with Dr. Duplorel, rue de Bourbon. Very kindly and honourably received by him, ladies and guests. Met there a Mr. Roberts,

Regius Professor à l'École Royale Militaire, who was very particularly civil and attentive to me.

Feb. 2. Dined tête-à-tête Mad. and M. Le Compte de Crofton; *tres très agréable*. Evening at M. l'Abbé de Viernay; the private comedy at his hotel, very well played; a tragedy and comedy after it. After which an elegant supper and entertainment in his salon. Honoured with the heroine of the play at my side; much good humor, and sung most charmingly, as did the others.

Feb. 3. Dined with Mad. and Compte de Crofton. Evening, at nine, Mr. Franklin called on me, and carried me and introduced me to Madame Morrell, where I was most kindly received indeed, and met there the charming Mad. de Villars, friend to Mad. B., both of them being from Lyons. Several other ladies, marquises, barons, &c. Met here the celebrated and extraordinary genius M. Garat, a very fine handsome young gent, who sings delicately and with perfect exactness (so as to correct instruments which accompany him) any tune which he hears; can imitate exactly each and every one of the opera singers, etc. His voice exquisitely melodious, and though powerful, delicately soft and engaging, and his manner most gentleman-like. Many compliments passed between us, on his talents and my late enterprise. I cannot describe the lovely ease and elegance, yet delicate decency, with which Mad. Morrell and Mad. de Villars undressed themselves in my presence, and dressed again in lovely dishabille, previous to our going to the masqued ball at the opera, where I had the honor to attend them, and found them there as elsewhere most lovely and engaging. Met at the ball many ladies who knew me, but I could not know them all, so covered with dominos and masques. Two English ladies (Mrs. Lawrence and her little ward), one of whom I walked with again and again, but she would not let me know who. Afterwards met them both with his Grace the Duke of Chartres, with whom they appeared to be engaged. The Vicomtesse Liniere found me out, and we had many pleasant repartees before I knew her, promised to meet me at supper to-morrow, and wished much to be informed how I liked the lady I supped with last Sunday (which was herself). I tore off a piece of her fan as a token, which she consented to. Madame Talairac likewise found me out. After long time I found out my lovely Mad. Morrell and Mad. Villars, with whom and Mr. Franklin I left the ball at four o'clock. What would I not give to be able to transport such easy, engaging manners, joined with such wit and delicacy, to England. Mr. Franklin told me he had again met the Duke of Dorset at Versailles on Tuesday, and had again talked with him about me, and that his Grace had said that he would most

willingly do anything for me I would point out." Mr. F. mentioned to him that it would, he thought, be useful to me for his Grace to write to the minister, and recommend some pension or such like for me from government. Mr. Franklin said he had wrote to his father the Governor, desiring him to hint to Dr. Blagden, the Secretary of the Royal Society, that he should make me a member, free of all expense. Met Com. Paul Jones at the opera masque ball; apropos repartees.

Feb. 4. This evening the lovely Mad. Morrell called on me and carried me to supper with her lovely friend, Mad. du Villars—both of them so lovely, engaging and agreeable that I wish my charming country-women would catch and imitate their elegant ease of carriage and manners.

Feb. 6. Waited on his Grace, the Ambassador, the Duke de Dorset. Very kindly received by him and Mr. Stone, his private secretary; Mr. Hales, Secretary of the Embassy; Rev. Mr. Labord, his chaplain. Met there the Count d'Ossier, who was attentive to me; Lady Hervey and her little daughter; Lady Eliz. Forster, Lady H.'s sister; a fine little boy, son of the Duke by Madame Baccelli, a number of noblemen and gents. The Duke told me that he was well pleased that I did not suffer the Frenchman to pass over alone.

Feb. 8. Dined with M. Sellorf. Met there and was introduced by him to M. Le Prince de Hesse, Monseigneur le Prince de Deux Ponts, the Swedish Secretary, M. le Compte de Sickengen, Minister de le Duc de Barriere; Le Prince de Deux Ponts very particularly attentive and civil to me. Was acquainted with Sir Benj. Thompson, and told me he was aid de camp to his uncle the Prince (I think he said of Bavaria.) The streets of the city and faubourg full of masques of all ranks and sorts. Am glad this is the last day of the carnival; on the morrow they must to their several vocations again.

Feb. 10. Dined with Mr. Roberts, Regius Professor at l'École Royale Militaire. Met there Dr. Sutton, the celebrated inoculator. Visited the apartments and the elegant grand building of the Hotel des Invalides, Champ Mars, &c.

Feb. 11. Walked out to Passy, and dined with Dr. Franklin. Very kindly received and entertained by him, and very pleasant conversation. Evening, Mr. Franklin brought me to town in his chariot, and said he would again speak to the Duke of Dorset and his Secretary, respecting their writing in my favor to England. Engaged me to dine there on Monday next, to meet the Marchioness and Marquis de Fayet, Mr. Adams, Lord Mountmorris, &c., &c.

Feb. 11. Supped with La Comtesse and Le Compte de Crofton, and met there the Comtesse de Belvidere, &c.

Feb. 12. Breakfasted with Dr. Du Plaril; afterwards visited with him l'Hotel de Charité; found all the apartments, wards, &c., very clean and airy; patients clean, beds made, &c.; only men there. A pretty botanical garden, with labels affixed to and standards to each plant. Thence visited l'Hotel de Dieu, an exceeding large hospital, part on one side of the river, and part on the other, connected by a bridge belonging to the hospital. Between five and six thousand patients; four rows of beds in many of the wards. Patients of all descriptions, ages, sexes, and nations are admitted. Wards for all sick children, from two or three months to two or three years, struck me as novel. Warm and cold baths frequent and conveniently placed. Saw in the box for that purpose several human calculi very large. Conducted through all the female wards; some very low and dark; three, four, and five sick adults in the same bed, lying heads and points. Visited, just by the Hotel Dieu, l'Hotel des Enfans trouvés; very neat, roomy, and in good order.

Feb. 13. Attended the Duke of Dorset's concert. His Grace condescendingly attentive to me, and Mr. Stone, his private secretary, and many other English noblemen and gents. Met there Lady Eliz. Forster, who was civil to me, Lady Betty Lindsay and her sister Lady Mary Fordyce. Asked and received of Mr. Stone a request from the Duke to the Supt. of Police to give me a passport for myself and servant.

Feb. 14. Dined at Passy with the American Ambassador, Dr. Franklin; met there his Excellency, John Adams, Esq., his lady and daughter, all of whom were very civil to me; Lord Mountmorris, who was very uncommonly attentive and civil to me all the time; the Marquis and Marchioness of Fayet, a fine affable lady; Mrs. Bingham, a very genteel American from Philadelphia, and Mr. Bingham; Col. Humphreys, late aid-de-camp to Gen'l Washington, now a Commissioner from America; Mr. Jon. Williams; a Mrs. Boadley, &c., and several other gents of rank and note; Commodore Paul Jones, who was very attentive, candid, and complimentary to me, and who brought me to Paris with him in his chariot. Talked with Mr. Franklin about the Duke of Dorset, and he advised me to call on the Duke to-morrow, make use of his name, and ask of his Grace a letter from him to the Minister in England, Mr. Pitt. Took leave of the venerable old Dr., and received many compliments, with his best wishes, &c. Supped with Comtesse and Compte de Crofton, and by him introduced to his brother, a very agreeable gent.

Feb. 16. Waited on his Grace, the Duke of Dorset, the Ambassador.

Very kindly received by him; talked freely, and most friendly to me; said he would write or do anything for me that I thought would be most useful to me; and proposed to me to make application to the King; said he thought he might, and that he would give me a letter to Mr. Pitt, the Minister, to inform him what the King had done here for Blanchard. Thence I set out with Chevalier Crofton for Luciennes and St. Germain. Passed over the bridge, which is the largest and best I have seen in France; although so long, quite plane, and has stones of 32 feet length, for the ballustrade barrier. On the left of it, in the Bois du Boulogne, saw the Royal Chateau de Madrid, which was built by the French for a pretended residence of Francis the First, to enable him, under pretext of the name, ignominiously to break his parole and engagement to the Emperor Charles the Fifth, who had taken him prisoner, and let him on his parole return to France, under engagement that he would soon return and surrender himself again a prisoner at Madrid, the Emperor being at that time (also) King of Spain. We stopped at Machine de Marli, to visit M. Le Chevalier Brouard, Maitre de Machine, &c. Very kindly, hospitably, and affectionately received by him and his niece Mademoiselle; gave us a card to Madame à le Pavillon du Madam la Comtesse du Barry à Luciennes. Visited the Pavillon; most elegant and luxuriantly rich, clean and beautiful; very fine busts and statues of the King Louis XV., pictures, &c. Then went through the lovely gardens from the Pavillon to the hotel de la Comtesse. Found her at her toilet, having a select company party to dine to-day (dinner serving up) and designing a ball privé this evening. However, ordered that I should be shown the apartments, &c. Found them, like the Pavillon, rich, elegant and beautiful, with most lovely and enchanting conveniences and designs. &c. The very fine portrait of the King given by him to Mad. La Comtesse du Barry, and her own elegant picture, a fine and beautiful likeness, with many others of the King and Comtesse, busts and statuary of them with various designs. The villa of Lady Craven, pretty and charming, situated near Madame du Barry, and the elegant Chateau de Monseigneur le Duc de Aiguillon, who was Secretary of State and War at the time of Madame du Barry's connection with the King. At St. Germain, which is a lovely town in a fine high situation, and extensive forest, with beautiful terrace above half a mile in extent, with the forest on the left and the river and extensive beautiful country on the right, the situation being so high as to command the river a great many miles. Dined at the Castle with Mad. and Dr. O'Flynn, very kindly and hospitably received by them; called on Mr. Williams at the Castle, met there four of the Misses Alexanders, Mrs. Williams's sisters. Intro-

duced by the Chevalier Crofton to Maj. Kelly of the Irish Brigade, kindly received by him with many compliments. At six o'clock returned to M. Brouard à la Machine de Marli and then we went to the ball at Madame du Barry's à Luciennes. Found a number of young women and men dressed very prettily to dance, with good musick, &c. Met there M. le Marquis de Chabrilian whom I had visited at Versailles. He was very civil and attentive to me, mentioned me and introduced me to Mad. le Comtesse du Barry and her sister, and to Monseigneur Le Duc de Brissac, Governor of Paris, to M. Le Comte D'Orsay and M. le Marquis de Fondrille, all of whom were very polite and attentive, particularly the Duc de Brissac and Le Compte d'Orsay, who paid me many and great compliments. La Comtesse du Barry was exceedingly pleasant and in good spirits, complimented me again and again, and declared herself greatly pleased and gratified in my company. After taking leave of me, she again sent the Compte de Chabrilian to request my company to her apartments, where I had a most agreeable chat and repartee with her for near an hour, and after it did me the honour to propose dancing with me, ordered refreshment, &c. When I finally took leave at midnight, she again expressed how happy she was to have had my company there, and paid me many more compliments. Her sister resembled her much in features, but not so elegant or handsome. Returned to La Machine de Marli, took leave, with grateful thanks to M. Le Chevalier Brouard and Mad'lle, and at one in the morning returned to Paris.

Feb. 17. Visited with Dr. Duplariel the Jardin du Roi and Cabinet d'Histoire Naturelle. Found elegant apartments, and fit for the purpose, and fine collections of fossils, woods, stones, insects, birds, animals, fishes and anatomical preparations and reptiles, in very good preservation. Very politely received by M. Dauberton, M. Le Comte de Buffon, and invited to dine with him to-morrow. A very fine statue of the Compte de Buffon (at the entrance) in fine marble, well executed and with well designed emblems. After which visited the gardens of the Arsenal and the Royal prison of the Bastile, a dreadful place.

Feb. 18. Called on the Ambassador, his Grace of Dorset; very kindly (as always) received by him, and requested not to leave Paris to-morrow, but to call on him again to-morrow forenoon. Took my place in the diligence for Calais, to set out Monday forenoon. With the Count de Crofton called on Mad. La Vicomtesse de Liniere. Found her *au lit*, but admitted and received most kindly and more. Showed her the rapiéce I had made at the opera masqued ball (piece of the fan). She acknowledged in the greatest good humour the *identity*, and was much pleased that I had

kept it. Indulged me in the most lovely embraces and adieux, made her compliments and best wishes, said she would come to England in the spring, and would find me out then. Dined with M. le Comte de Buffon au Jardin du Roi. Most politely, honourably, and affectionately received by him and M. Panchenot, who dined with him. Honoured with many and great compliments by le Comte, and which from such a man are indeed more than compliments. Made me a present of one of the last proof prints of himself by N. P. Casson. Took affectionate leave of me, with his satisfaction in my conduct, and in seeing me; and gave me his best wishes, as did M. Panchenot, very politely, desiring that I would remember him particularly to Sir Joseph Banks.

Feb. 20. Called on his Grace the Duc de Dorset, and received a letter from him in my favor to the Right Hon. Mr. Pitt the Minister in England, first Lord of the Treasury, &c. Evening with La Comtesse, le Comte and Le Chevalier Crofton, at the hotel, rue Traversière. Very affectionate, polite and agreeable, like sisters and brothers ever since I have been here, and in a manner the least irksome and the most agreeable.

Feb. 21. Called on Mad. la Comtesse de Crofton, M. le Comte, and the Chevalier her brother. She has been as a mother, sister and friend to me since I first saw her. With the most affectionate and tender embraces, encore & encore, her eyes full of tears, bid me adieu, with her earnest request to return again soon, or to live with her ever. The good Comte would accompany me to the bureau, nor quit me until we drove from the yard, when, with the most friendly adieu and engagements to embrace again for me the fair Vicomtesse de Linlere, at half after twelve o'clock we set out from the rue Notre Dame des Victoires, *en diligence* for Calais.

Feb. 27, 1785. At a quarter past four P. M. I landed safe (thank God) at Dover.

Feb. 28. This forenoon Col. York, Capt. Campbell, &c., &c., officers of the 69th, did me the honor to come to Maurice's Hotel to pay their compliments to me. Dined with Col. York and the gents of the 69th. Lt. Crofton delivered me a message from Sir Thomas Hyde Page, requesting to see me to-morrow forenoon. Mr. Young informed me that it was in contemplation to present me with the freedom of the city &c. This P. M., in my absence, Sir Thomas Hyde Page called on me. The officers and gents at the castle very particularly civil and polite to me.

Mar. 1. Dined with Mr. Fector, his family, Sir T. H. Page, etc. Received very great and repeated marks of attention from Mr. Fector, the ladies, and Sir T. H. Page.

This afternoon received a message from Mayor of City and Corporation, assembled in Town Hall, desiring my company there. I accordingly

waited on them, and was informed that they had assembled and *unanimously* voted me the freedom of the city, and to be a Baron of the Cinque Ports; for which I returned many thanks to the Mayor and Corporation, and took the oaths accordingly, as usual on such occasions. I was informed that there were but seven honourary Freemen besides myself, that I made the eighth; that the Duke of Dorset, Lord Sackville, and Sir Richard Pierson are three of them.

Mar. 2. Breakfasted with Lady and Sir T. H. Page. After breakfast, Mr. Stringer and Capt. Walter, two of the Corporation, called on me, with their congratulations; and with Sir T. H. Page, Dr. Young, and Mr. Fector, I called on the Mayor, corporation and Common Council, with many thanks for the honour done me yesterday, in admitting me a Freeman and a Baron of the Cinque Ports. They again mentioned to me that this had not been done in the usual way by ballot, but that it had been done *vive voce*, having been *unanimous*, which they said was a very uncommon instance. Mr. Springer and Mr. Walton said my freedom would have been presented me yesterday in a gold box, if they could have found any trace or precedent for it in their records.

Dined at the Antwerp, by invitation, with the Mayor, Sir T. H. Page, and the principal gentlemen of the town. After, the Association Band of musick came to the Antwerp to pay their compliments to me, dressed in their uniforms, and with their instruments of musick entertained me for some time; then payed their compliments and good wishes to me, and retired. Yesterday the officers of the 69th came to pay me their compliments at my hotel.

Mar. 3. At noon visited the cliff and spot of our departure on our late aerial voyage into France. The recollection of it was awfully grand and majestick, and my heart filled, I hope, with sincere and grateful acknowledgements to the kind protections of that day. Oh, Gracious Father, may I be influenced by it as I ought through my life!

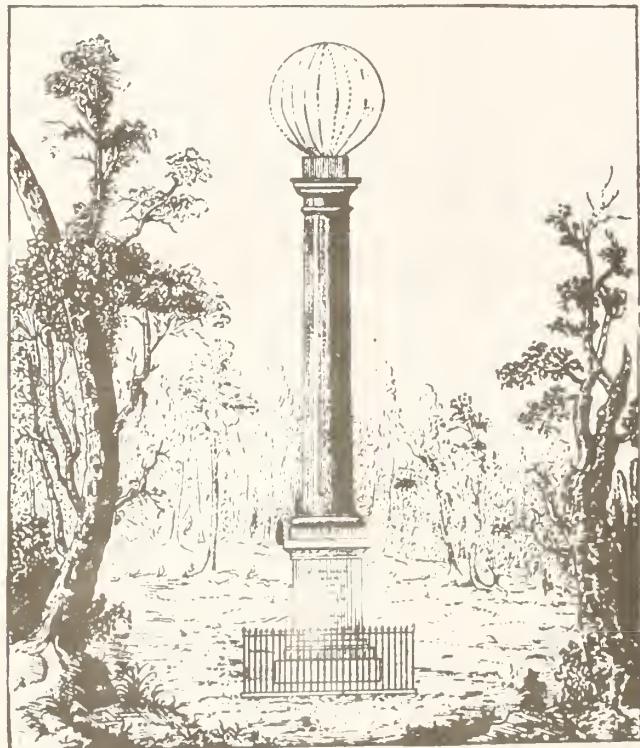
Mar. 5. At quarter after four o'clock, arrived, thank God, at Margaret St., Cavendish Square, London.

John Jeffries Jr.

Under royal consent the "Corps municipal de la ville et Comté de Guines" voted Feb. 17th 1785 to erect a monument at public expense where the balloon alighted in the forest. It still stands, but shorn of its cap and tablets, awaiting the repairs which it is hoped a centennial interest, &c., may secure.

INSCRIPTION ON THE FRONT OF THE COLUMN.

Regnante Ludovico XVI
 Anno MD.C.C.LXXXV
 Joannes Petrus Blanchard-Gallus.
 Comites Joannes Jeffries. Britannus
 Die VII. Mensis Januarii
 Hora. Ia. Post meridianâ
 Ex Arce Dubriensi
 Machina Aerostatica
 In sublime Ejectus
 Fretum Britanniam inter et Galliam
 Primus superavit,
 Ex post Horas II. S. Aerii cursus
 Hoc in loco consedit,
 Audaciam mirati Novam
 Cives Guisnenses hocce Monumentum
 Posuerunt.



THE COLUMN.

On the reversed sides of the column are engraved, on the one, the Arms of Guines, and on the other those of the Viscount Desandrouin.

ON THE OPPOSITE SIDE OF THE COLUMN.

Sous le regne de Louis XVI.

MD.C.C.LXXXV

Jean Pierre Blanchard des Andelis en Normandie

Accompagné de Jean Jeffries, Anglois

Partit du Chateau de Douvres

Dans un Aérostat,

Le VII Janvier, à une Heure et un quart

Traversa le premier les Airs

Au-dessus du Pas de Calais

Et descendit à Trois Heures Trois Quarts

Dans le Lieu même où les Habitans de Guisnes

Ont élevé cette Colonne

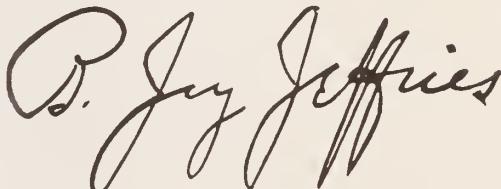
A la Gloire des deux Voyageurs.

(Signé)

De Guizelin, Lt. de Maire

Fortin, Berger, De Launay, Le Fevre

Echevins et Officiers Municipaux



15 CHESTNUT STREET,

BOSTON, MASS.

